XL-E78BK
XL-E79TN

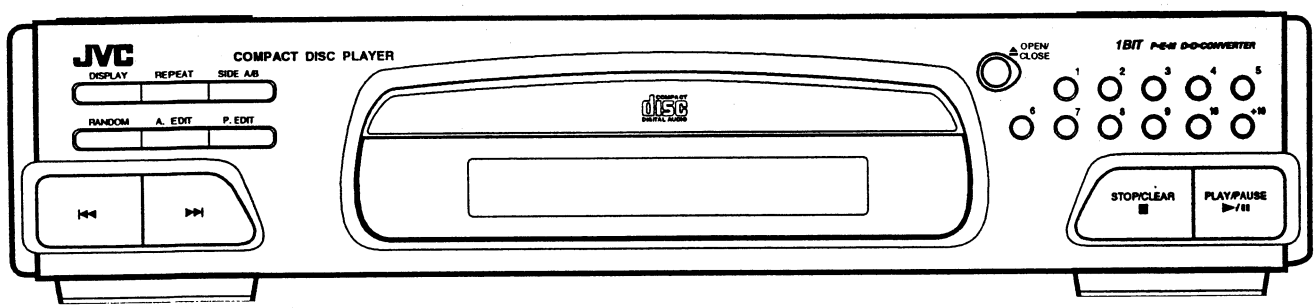
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

DX-E78BK/DX-E79TN

(UNIT No.XL-E78BK/XL-E79TN)



This manual shows the differences bitween XL-E58BK/XL-E59TN and XL-E78BK/XL-E79TN. When servicing, refer to the manual of XL-E58BK/XL-E59TN(Manual No.20386).

★ XL-E78BK and XL-E79TN are completely the same in their structure, except for the outlook colur.
★ For the instruction book, refer to the AX-E78BK/AX-E79TN service manual (No.20386 or No.20387)
★ AX--E78BK (or AX-E79TN) is need (for power supply etc.) when servicing.

No. 20425
May. 1993

XL-E78BK
XL-E79TN

Coment

Page	Item	Parts Name	XL-E78BK	XL-E79TN
P2-3	1	Front Panel Assy	EFP-XLE78BKE(S)	EFP-XLE79TNE(S)
P2-3	1-1	Front Panel	E102656-004SF	E102656-003SF
P2-3	24	Rear Panel	E26446-008SF	E26446-007SF
P2-6	---	Main PC Board Assy	ENN-385	ENN-385
P2-3	26	Plug Cord Assy	EWP907-015	EWP907-015
P2-10	---	Packing Case	E307416-095SF	E307416-094SF
P2-10	---	Packing Pad(Front)	E207724-003SF	E207724-003SF
P2-10	---	Packing Pad(Rear)	E207724-004SF	E207724-004SF

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO DIVISION, YAMATO PLANT, 1644, SHIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN

(No.20425)

Printed in Japan
9306(P)

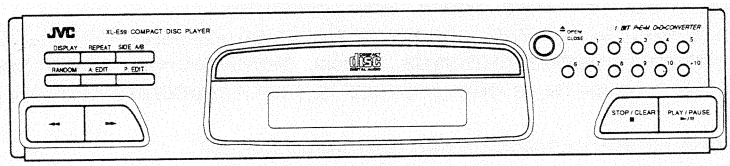
XL-E58BK
XL-E59TN

JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

XL-E58BK
XL-E59TN



COMPACT disc DIGITAL AUDIO

★ XL-E58BK and XL-E59TN are completely the same in their structure, except for the outlook colur.
★ For the instruction book, refer to the DX-E58BK/DX-E59TN service manual (No.20385)
★ DR--E58BK (or DR-E59TN) is need (for power supply etc.) when servicing.

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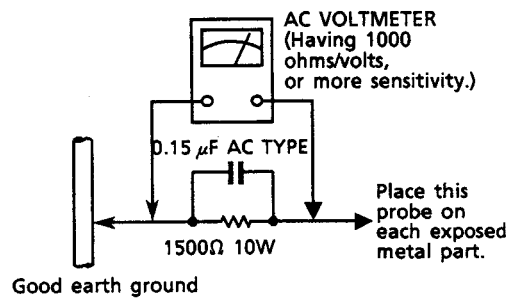
No. 20386
Dec. 1992

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, contorl shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION : If safety switches malfunction, the laser is able to function.
6. CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
7. CAUTION : The compact disc player provides a laser diode of wavelength 760-800nm and optical output power typical 3mW at the laser diode.

VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

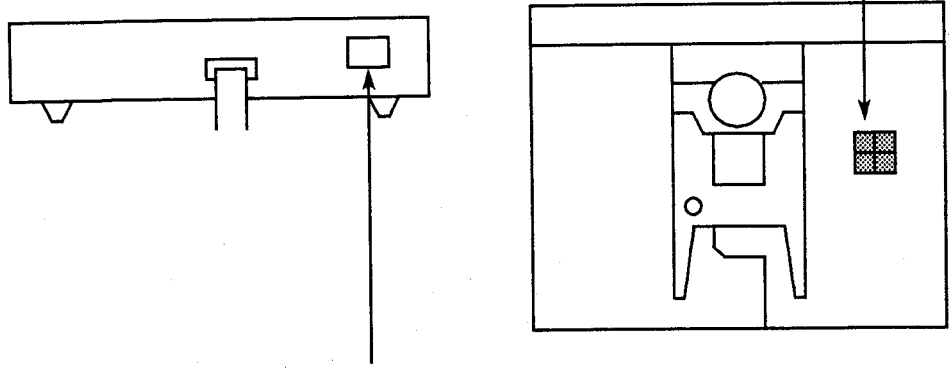
WARNING LABEL
(Except for the U. S. A.)

DANGER: invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

VARNING: Osynling laserstråling när denna del å öppnad och spärren är urkoppled. Betrakta ej stålen. (s)

ADVARSEL: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude at funktion. Undgåudsættelse for stråling. (d)

VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)



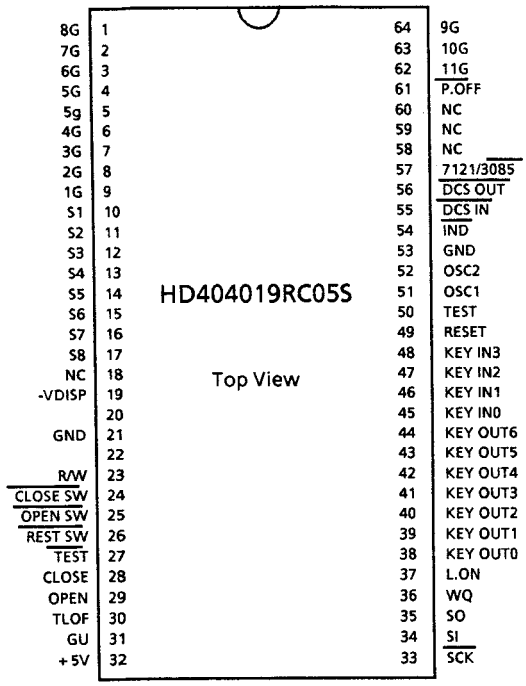
CLASS 1
LASER PRODUCT

CLASSIFICATION LABEL
(Except for the U. S. A. and Canada)

Description of Major LSIs

■ HD404019RC05S(IC991) : CD SYSTEM CONTROLLER

1.Terminal Layout



2.Key Matrix

	KEY IN 0 (PIN 45)	KEY IN 1 (PIN 46)	KEY IN2 (PIN 47)	KEY IN3 (PIN 48)
KEY OUT0 (PIN 38)	⏮	SIDE A/B	REPEAT	DISPLAY
KEY OUT1 (PIN 39)	RANDOM	⏭	A.EDIT	P.EDIT
KEY OUT2 (PIN 40)	OPEN/ CLOSE	–	4	–
KEY OUT3 (PIN 41)	3	1	2	–
KEY OUT4 (PIN 42)	▶/⏸	■/ CLEAR	5	–
KEY OUT5 (PIN 43)	10	6	8	–
KEY OUT6 (PIN 44)	+10	7	9	–

3.Pin Function Description

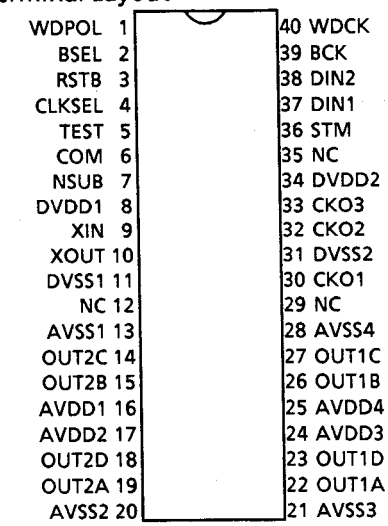
Pin No.	Symbol	I/O	Function and Operations	Pin No.	Symbol	I/O	Function and Operations
1	8G	O	FL grid control output	33	SCK	O	Clock output
2	7G	O	〃	34	SI	O	Serial data output
3	6G	O	〃	35	SO	I	Serial data input
4	5G	O	〃	36	WQ	I	Write request input
5	5g	O	〃	37	L.ON	O	Laser control signal
6	4G	O	〃	38	KEY OUT0	--	Key Matrix output
7	3G	O	〃	39	KEY OUT1	O	〃
8	2G	O	〃	40	KEY OUT2	--	〃
9	1G	O	〃	41	KEY OUT3	O	Key Matrix output
10	S1	O	FL segment control output	42	KEY OUT4	O	〃
11	S2	O	〃	43	KEY OUT5	O	〃
12	S3	O	〃	44	KEY OUT6	O	〃
13	S4	O	〃	45	KEY IN0	I	Key matrix input
14	S5	O	〃	46	KEY IN1	I	〃
15	S6	O	〃	47	KEY IN2	I	〃
16	S7	O	〃	48	KEY IN3	I	〃
17	S8	O	〃	49	RESET	I	Reset signal input
18	NC	--	Non connection	50	TEST	--	Test mode input (+5V)
19	-VDISP	I	Power supply for FL display	51	OSC1	I	Clock oscillation input
20	—	--	Connected to GNG	52	OSC2	O	Clock oscillation output
21	GND	--	GND	53	GND	--	GND
22	—	--	Connected to GND	54	IND	O	Non connection
23	R/W	O	Read / write signal output	55	DCS IN	I	Compulink signal input
24	CLOSE SW	I	"L" with tray closed	56	DCS OUT	O	Compulink signal output
25	OPEN SW	I	"L" with tray open	57	7121/3805	I	Non connection
26	REST SW	I	REST switch signal input	58	NC	--	〃
27	TEST	I	Entering test mode with TEST(L)	59	NC	--	〃
28	CLOSE	O	"CLOSE" signal output	60	NC	--	〃
29	OPEN	O	"OPEN" signal output	61	P.OFF	O	CDPower off signal
30	TLOF	O	Turns off tracking servo	62	11G	O	FL grid control output
31	GU	O	Increases tracking gain	63	10G	O	〃
32	+5V	--	Power Supply	64	9G	O	〃

■JCE4501(IC873) : D / A CONVERTER

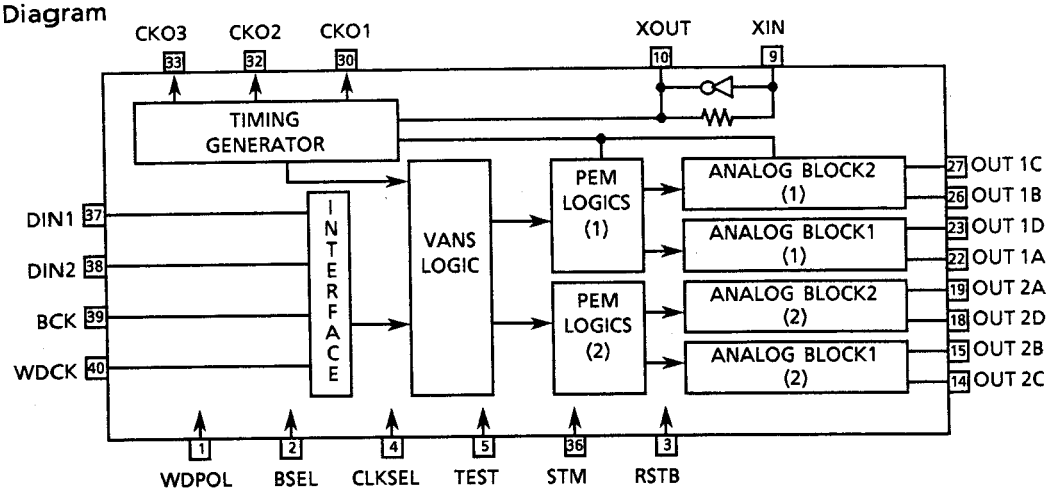
1. Outline

The JCE4501 is a CMOS digital-analog converter with independent left and right channels. It was developed for PCM digital audio equipment. It features pulse edge modulation (PEM) and Victor advanced noise shaping (VANS) for resolution equipment to 20 bits(0-20kHz) and a low distortion ratio. At JVC, this type of digital-analog converter is called a DD converter.

2. Terminal Layout



3. Block Diagram



4.Pin Function Description

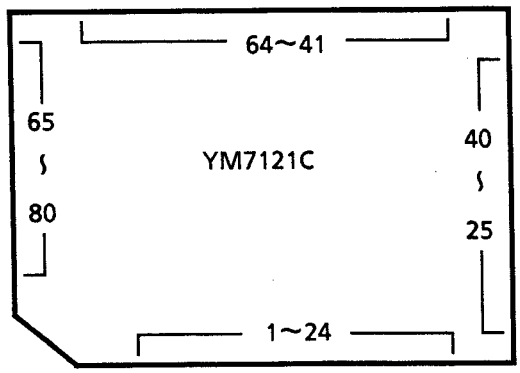
Pin No	Symbol	I/O	Description	Pin No	Symbol	I/O	Description
1	WDPOL	I	Word data polarity switching pin	21	AVSS3	--	Analog ground pin 3
2	BSEL	I	H:CDX2554P format,L: YM3414 format	22	OUT1A	O	1A PEM output pin
3	RSTB	I	Reset pin (low active)	23	OUT1D	O	1D PEM output pin
4	CLKSEL	I	H: 256fs mode,L: 384fs mode	24	AVDD3	--	Analog power supply pin 3
5	TEST	I	Test mode switching pin	25	AVDD4	--	Analog power supply pin 4
6	COM	I	COM board voltage fastening pin	26	OUT1B	O	1B PEM output pin
7	NSUB	I	Silicon board voltage fastening pin	27	OUT1C	O	1C PEM output pin
8	DVDD1	--	Digital power supply pin 1	28	AVSS4	--	Analog ground pin 4
9	XIN	I	Crystal oscillator input pin	29	NC	--	To ground
10	XOUT	O	Crystal oscillator output pin	30	CKO1	O	Clock output pin 1(384fs output)
11	DVSS1	--	Digital ground pin 1	31	DVSS2	--	Digital ground pin 2
12	NC	--	To ground	32	CKO2	O	Clock output pin 2(192fs output)
13	AVSS1	--	Analog ground pin 1	33	CKO3	O	Clock output pin 3(128fs output)
14	OUT2C	O	2C PEM output pin	34	DVDD2	--	Digital power supply pin 2
15	OUT2B	O	2B PEM output pin	35	NC	--	Non connection
16	AVDD1	--	Analog power supply pin 1	36	STM	I	Stereo/Monaural switching pin. H: stereo, L: left channel,reversed polarity left channel
17	AVDD2	--	Analog power supply pin 2	37	DIN1	I	Left channel 18-bits 8Fs serial data input
18	OUT2D	O	2D PEM output pin	38	DIN2	I	Right channel 18-bits 8Fs serial data input
19	OUT2A	O	2A PEM output pin	39	BCK	I	Bit clock input pin
20	AVSS2	--	Analog ground pin 2	40	WDCK	I	Word clock input pin

■ YM7121C(IC841) : Servo controller

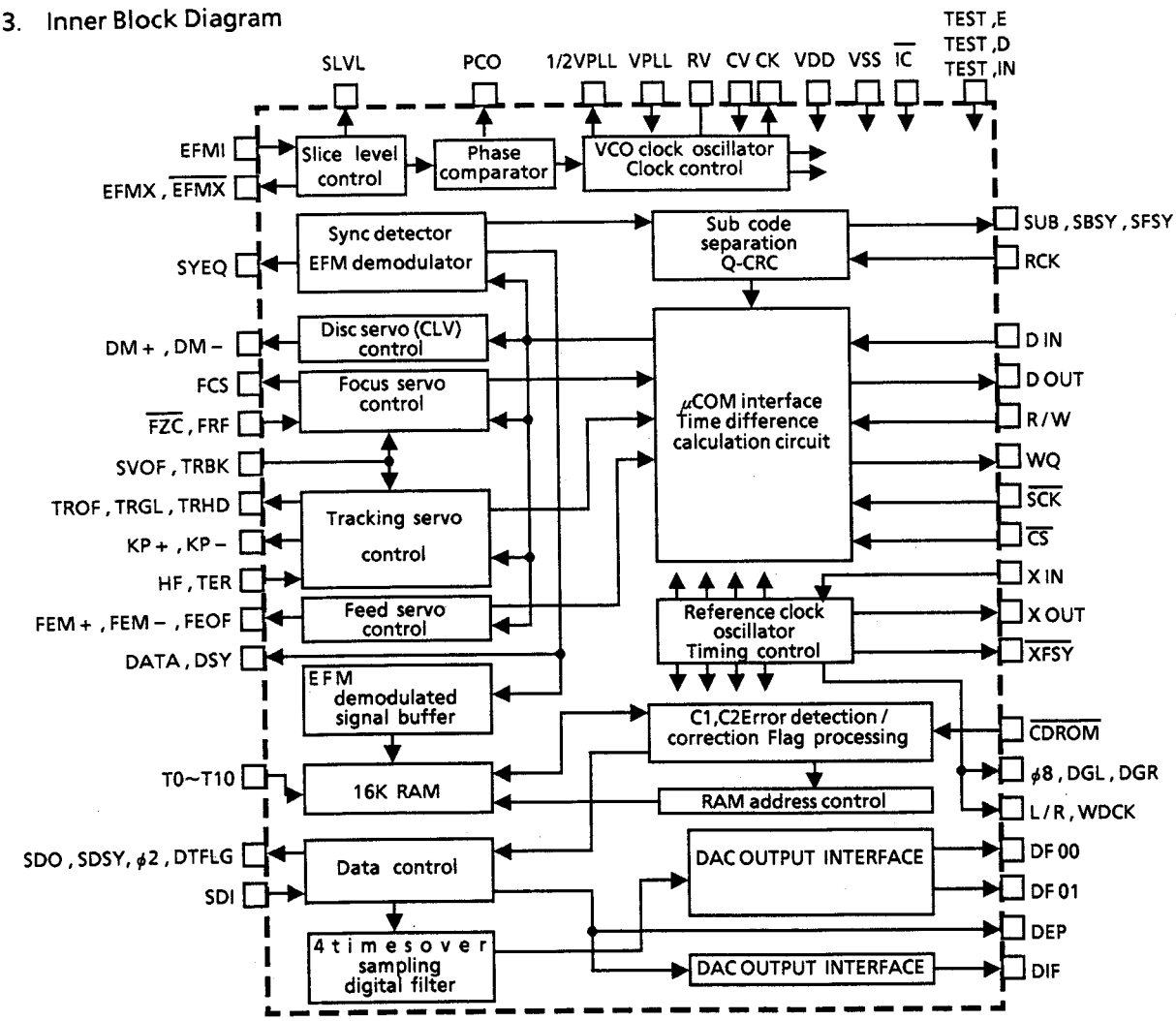
1. Outline

YM7121 is a C-MOS LSI for signal processing and servo control (SVC) in a CD player. It is used for the demodulation of the EFM signal from the laser pick up , detection / correction of the error signal , signal processing in digital filtering , etc. and for various servo controls (focusing , disc , tracking and feed servos).

2. Top View



3. Inner Block Diagram

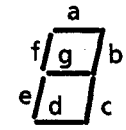


4. Terminal Description

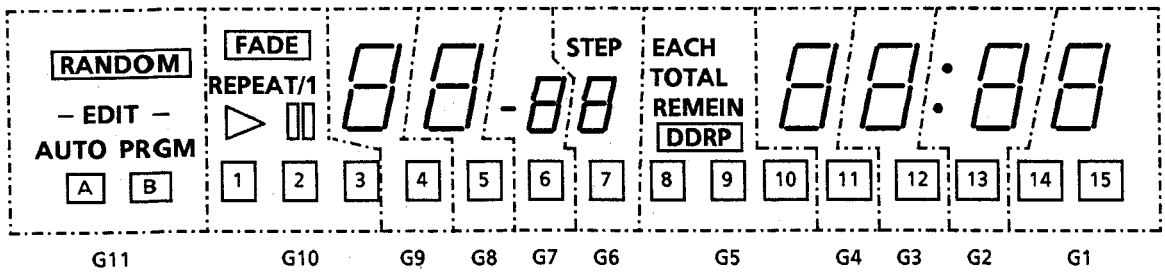
Pin No.	Symbol	I/O	Function and Operation
1	CV	—	Adequate time constant is added to this terminal and input the PCO output. This makes the structure of clock reproduce circuit by inner VCO circuit.
2	RV	–	RV terminal is standard voltage terminal of inner VCO. And capacity for stabilizing is added tothis terminal.
3,32,72	VDD	–	These are +5V power supply terminals.
4 5 70	TEST. IN TEST. E TEST. D	I I I	These terminals are for test. **(Not used)**
6	SYEQ	O	This is the check output terminal, it becomes high when flame synchronizing signal detected from EFM pattern coincides frame synchronizing signal from internal counter.
7	DSY	O	DSY is synchronizing signal which becomes high when first signal of data output comes in. This terminal is the check terminal. **(Not used)**
8	DATA	O	This terminal is for checks. The DATA is a serial signal of CK bit rate and it contains 8 bit EFMdemodulation signal and 5 bit data control signal in 17 bit. **(Not used)**
9	CK	O	CK has 4.3218 MHz clock.
10~19	T0~T9	I	These terminals are internal RAM test terminals, and connected GND.
22	DEP	O	De-emphasis is necessary when this terminal is high.
23	DIF	O	DIF is digital audio interface format output matched EIAJ standards. **(Not used)**
24	SDO	O	SDO is a serial signal output of $\phi 2$ bit rate. (The MSB puts in at first.)
25	SDI	I	SDI is the input terminal of 4 times over sampling digital filter. It is usually connected with SDO.
26	SDSY	O	This terminal changes the Lch/Rch by LSB of the SDO. **(Not used)**
27	DTFLG	O	Not used.
28	$\phi 2$	O	$\phi 2$ is 2.1168 MHz crystal clock. **(Not used)**
29, 52, 77	VSS	–	GND
30	XOUT	O	Not used.
31	XIN	I	Input from crystal clock.
33~38	—	O	Not used.
39	$\Phi 8$	O	
40	WDCK	O	Synchronizing signal
41	L/R	O	Synchronizing signal
42, 43	DGL,,DGR	-	Not used.
44, 45	DF00, DF01	O	Serial signal with $\Phi 8$ bit rate (DF00 : Left channel, DF01 : Right channel)
46	SCK	I	This terminal is connected to μCOM. It is an input terminal that carries the clock signal for data transfers.
47	R/W	I	This connects with microcomputer and it is an output terminal for switching data transmission mode. it enables to transmit data from SVC to microcomputer when R/M is "L" and from microcomputer to SVC when R/W is "H".
48	CS	I	This is chip select terminal for YM7121.
49	DOUT	O	This terminal is the data output terminal connected to μCOM. When R/W is low, data is transfered from YM7121 to μCOM, according to the SCK clock input.
51	DIN	I	This is a data input terminal connected to μCOM. When R/W is high, the data is transferred from μCOM to YM7121 according to the SCK clock input.
53 54	DM+ DM–	O O	These terminals output the PWM to control the speed of spindle motor. The speed of the motor goes up when DM+ is high, and slows down when DM– is high: both terminals can not become high simultaneously.
55 56 60 61 62 63 64	HF TER TRHD TRGL TROF KP– KP+	I I O O O O O	When tracks are being crossed during serches, the amplitude variation of the generated HF signal is sampled at the zero – cross point of the tracking error signal TER and the TROF signal is output. The level variations of this signal turn the servo on and off, greatly facilitaing track acquisition. KP+ or KP– is output to conduct tracking, and TRHD is output during tracking to cause generation of the tracking error signal. The TRGL signal is for increasing the tracking gain after tracking is completed.
57, 58, 59	FEM+, FEM–, FEOF	O	The FEM+ and FEM– are output as high speed feed signals, and FEOF signal is output for cutting the feed servo during high speed feed.
65	TRBK	I	TRBK is input to apply tracking brake from outside. TRGL becomes low with high input and inner control signal TBKE becomes high.
66	SVOF	I	When the signal inputs to SVOF, tracking and feed servo set to OFF. TROF and FEOF become "H" with high input, and TRHD, KP+, KP– become low.
67 58 59	FZC FCS FRF	I O I	These terminals are used for controlling the focus servo. The FCS is for a leading signal of focusing; the signal, generated when the focus point is achieved, stops the focusing operation, and FCO which is internal flag is dropped internally by FRF signal generated when reflected light is detected.
71	IC	I	YM7121 needs initializing when power supply turn on. IC will be low more than 400μs since XIN is input clock with VDD standard.
73 74 75	SLVL EFMX EFMX	O O O	Amplitude limited, mutually anti-phased signals are output from EFMX and EMFX. Slice level is controlled by these signals and external amplifier. SLVL is output amplitude alteration component of both terminals. When integral circuit is connected to external. YM7121 easily can control slice level.
76	EFMI	I	This terminal input EFM signal. (1~2 Vpp)
78	PCO	O	This terminal outputs the phase difference when the polarity of the clock and the EFM pattern changes.
79	VPLL	I	This terminal is input D.C. voltage matched VCO free run frequency. (17.2872 MHz)
80	1/2 VPLL	O	This terminal outputs a half of VPLL input, and capacity for stabilizing is added to this terminal.

Internal Connections of FL Display Tube

■ ELU0001-114 (FL991)



1. Grid Layout



2. Pin Connection

Terminal No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ELECTRODE	F	F	NP	NC	11G	10G	9G	8G	7G	6G	5G	P1	4G	3G	2G	1G	P2	P3	P4

Terminal No	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
ELECTRODE	P5	P6	P7	P8	P9	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NP	F	F

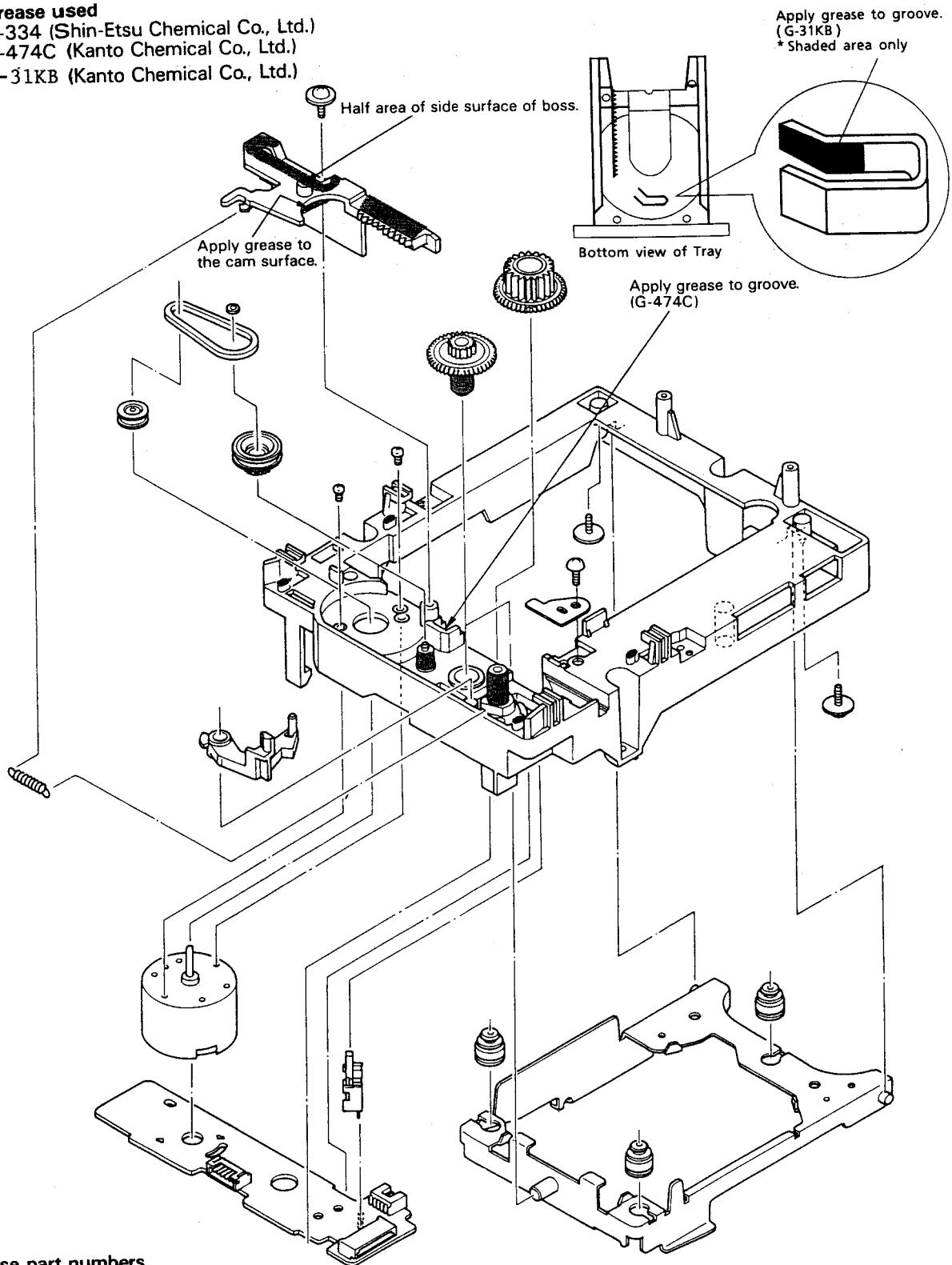
Note ···· F : Filament, G : Grid, Pi : Anode, NP : No pin, NC : No connection

3.Anode connection table

	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	—EDIT—	II	a	a	a	a	EACH	a	a	a	a
S2	AUTO	FADE	b	b	b	b	TOTAL	b	b	b	b
S3	PRGM		f	f	f	f	REMAIN	f	f	f	f
S4	B	REPEAT	g	g	g	g	DDRP	g	g	g	g
S5	A	1	c	c	c	c	10	c	c	c	c
S6	RANDOM	1	e	e	e	e	9	e	e	e	e
S7		2	d	d	d	d	8	d	d	d	d
S8		3	4	5	6	7		11	12	13	14
S9		▶			-	STEP				° °	15

Application Points for Grease

Grease used
- G-334 (Shin-Etsu Chemical Co., Ltd.)
- G-474C (Kanto Chemical Co., Ltd.)
- G-31KB (Kanto Chemical Co., Ltd.)


Half area of side surface of boss.
Apply grease to the cam surface.
Apply grease to groove. (G-31KB) * Shaded area only
Bottom view of Tray
Apply grease to groove. (G-474C)

Grease part numbers
G-334: EBS0006-009B
G-474C: EBS0006-019B
G-31KB: EBS0006-013B

Disassembly Procedures

■ Top cover removal

1. Remove the 4 screws holding the both sides of the top cover, and a screw holding the rear side of it.
2. Gently spread both sides of the top cover to the outside, lift up the rear section, and remove the top cover.

■ Tray removal

1. Remove the top cover.
2. Switch on the power. Press the OPEN / CLOSE switch to bring the tray forward, and turn the power off.
3. Remove the screw on the tray.
4. Pull the tray toward the front to move it.

Note: If the power does not come on due to breakdown or the like, insert a screwdriver through the hole Ⓖ and turn it clockwise to bring the tray forward.

■ Mechanism assembly removal

1. Remove the top cover.
2. Remove the tray.
3. Remove the 2 screws Ⓐ holding the clamp assembly, then remove the clamp assembly.
4. Remove the 3 screws Ⓑ holding the mechanism assembly.

■ Rear panel removal

1. Remove the 4 screws Ⓔ holding the rear panel.
2. Remove the rear panel.

■ Main P.C. Board(ENN-366-1) removal

1. Remove the top cover.
2. Remove the rear panel.
3. Remove the connectors on the main p.c. board.
4. Remove the 4 screws Ⓓ holding the P.C.board .

■ Front panel assembly removal

1. Remove the top cover.
2. Remove the tray.
3. Remove the 3 screws Ⓕ at the bottom of the front panel.
4. Remove the connector.

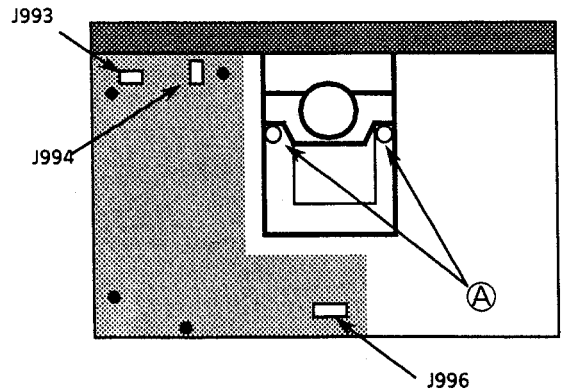


Figure 1

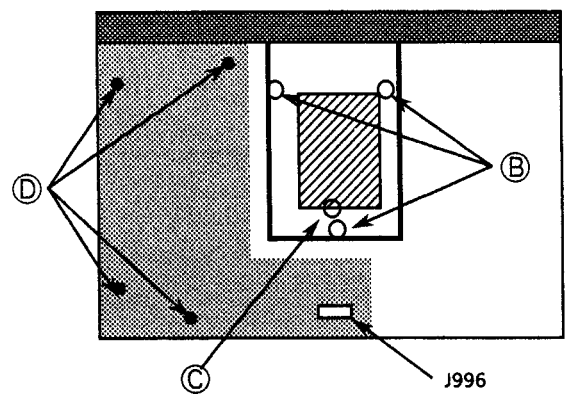


Figure 2

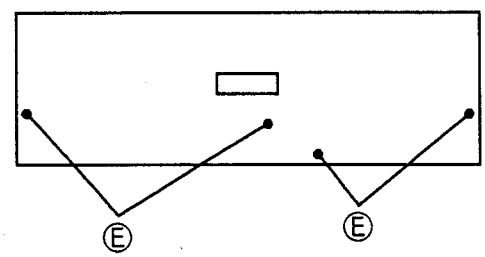


Figure 3

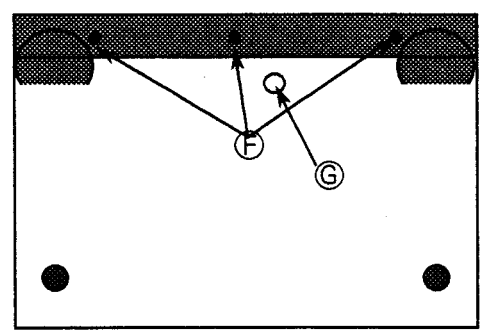


Figure 4

■ Laser Pickup removal

1. Remove the top cover, tray assembly and the clamp assembly.
2. Move the Pickup unit from rest position to the center pushing ⑤ point with finger.
3. Remove the screw ② from the CD Rack assembly, and remove the CD Rack assembly.
4. Remove the screws ① from the CD mechanism base assembly.
5. Remove the CD Holder fastening the shaft from the CD mechanism base assembly. (Release the hook ⑥)
6. Remove the CD Pick Unit with the shaft.

■ CD Pick Unit installation

1. Connect two wires with the connectors of APC P.C.Board.
2. While installing the ③ in the CD Support, set the shaft on the base hook④.
3. Install the CD Holder.
4. Install the CD Rack assembly in the CD Pick Unit.
   1) Fit end ⑦
   2) Fix screw ②.

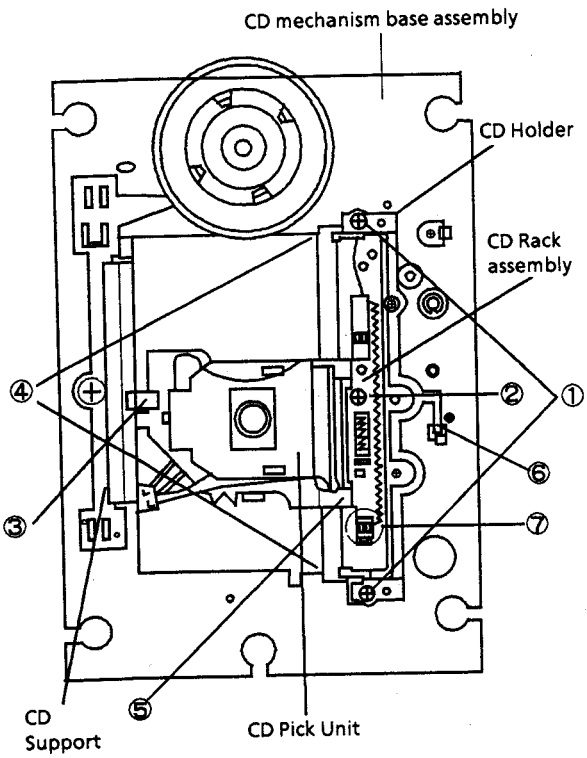


Figure 5

■ Spindle motor removal

1. Remove the CD mechanism base assembly.
2. Remove the turntable, and remove the two screws retaining the spindle motor.
3. Remove the screws retaining the Spindle and Feed Motor P.C. Board and unsolder it.

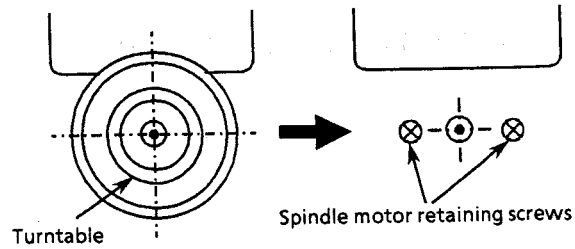


Figure 6

■ Spindle motor installation

1. Tighten the 2 screws to the same torque.
2. Fasten the Spindle and Feed Motor P.C. Board with the screw and solder.
3. Install the turntable.When installing, press straight down at the center of the turntable until the distance from the surface of the mechanism base to the top of the turntable is exactly 12.0 ± 0.1mm.

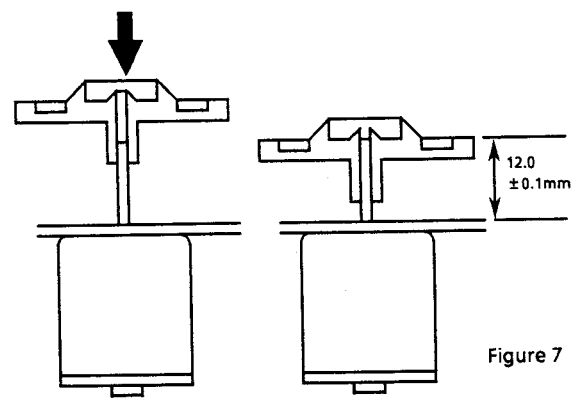


Figure 7

4. After insertion is complete, bond the motor shaft and turntable together (at the section marked by a arrow in the figure on the left below).

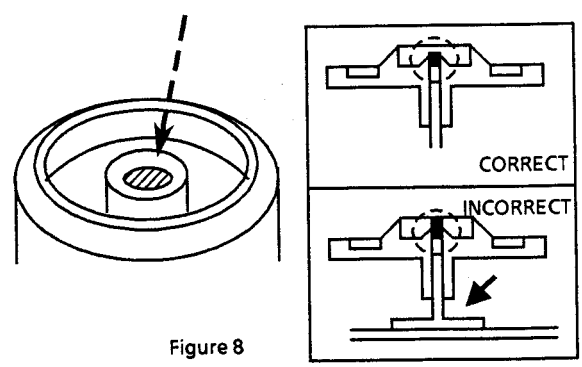
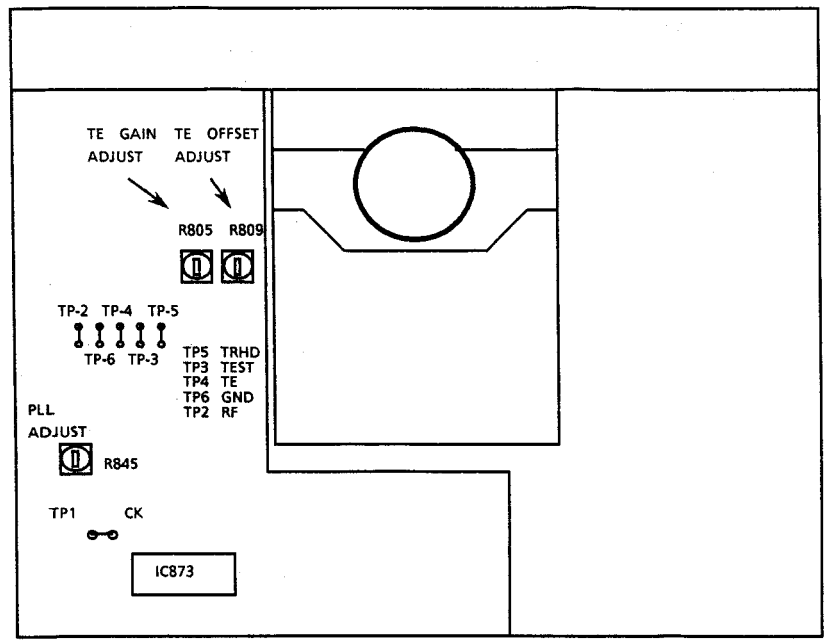


Figure 8

5. Use "LOCKTITE" #460 bonding agent, and apply as little as possible. Take care not to allow any excess bonding agent to get onto the turntable. Be extremely careful not to allow bonding agent to adhere to the motor bearings (the section marked by an allow in the figure8 on the right).

Adjustment Procedures

FRONT



REAR

■ PLL free-running adjustment

a. Measuring instrument
Frequency counter

b. Adjusting procedure
1. Set the player to stop mode.
2. Connect a frequency counter with TP1 (CK) and TP6 (GND) on the main PC board.
3. Adjust R845 for setting the counter's value becomes 4.295 ± 0.005MHz.
4. Perform this adjustment immediately after the power is turned on.

■ Tracking gain adjustment

a. Measuring instruments
Oscilloscope, Normal disc

b. Adjusting procedure
1. Connect an oscilloscope with TP4 (TE) and (GND) on the main PC board.
2. Play the disc.
3. Short circuit TP3 (TEST) to GND.
4. Adjust R805 for setting tracking error signal becomes 2.0 V_{p-p}.

■ Tracking offset adjustment

a. Measuring instruments
Oscilloscope, Normal disc

b. Adjusting procedure
1. Connect an oscilloscope with TP4 (TE) and TP6 (GND) on the main PC board.
2. Play the disc.
3. Short circuit TP3 (TEST) to TP6 (GND).
4. Adjust R809 for setting the DC level of the tracking error (off set) becomes 0.
Note: Adjust R809 for setting the waveform becomes symmetrical around the 0 level.

Flow of Functional Operation Until TOC is Read

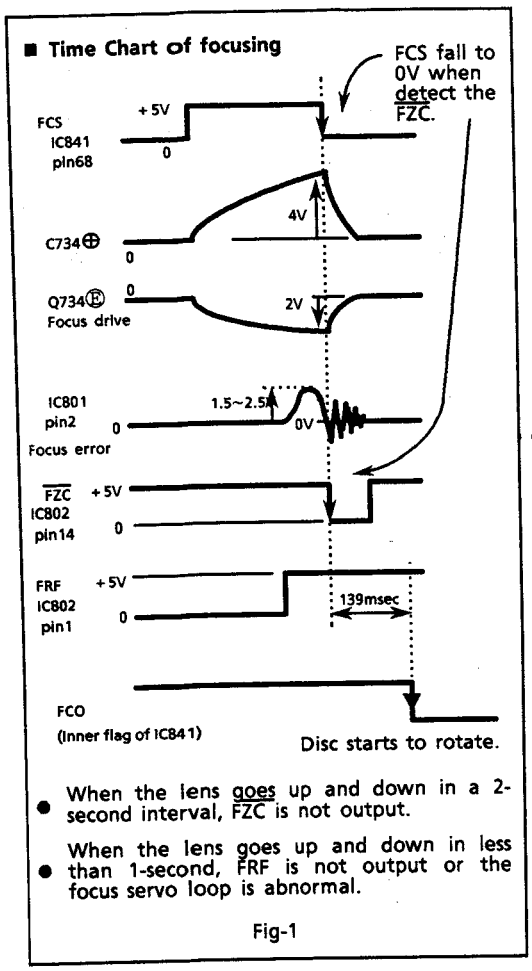


Fig-1

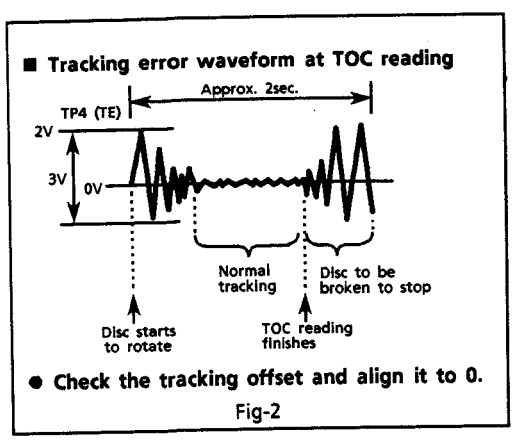
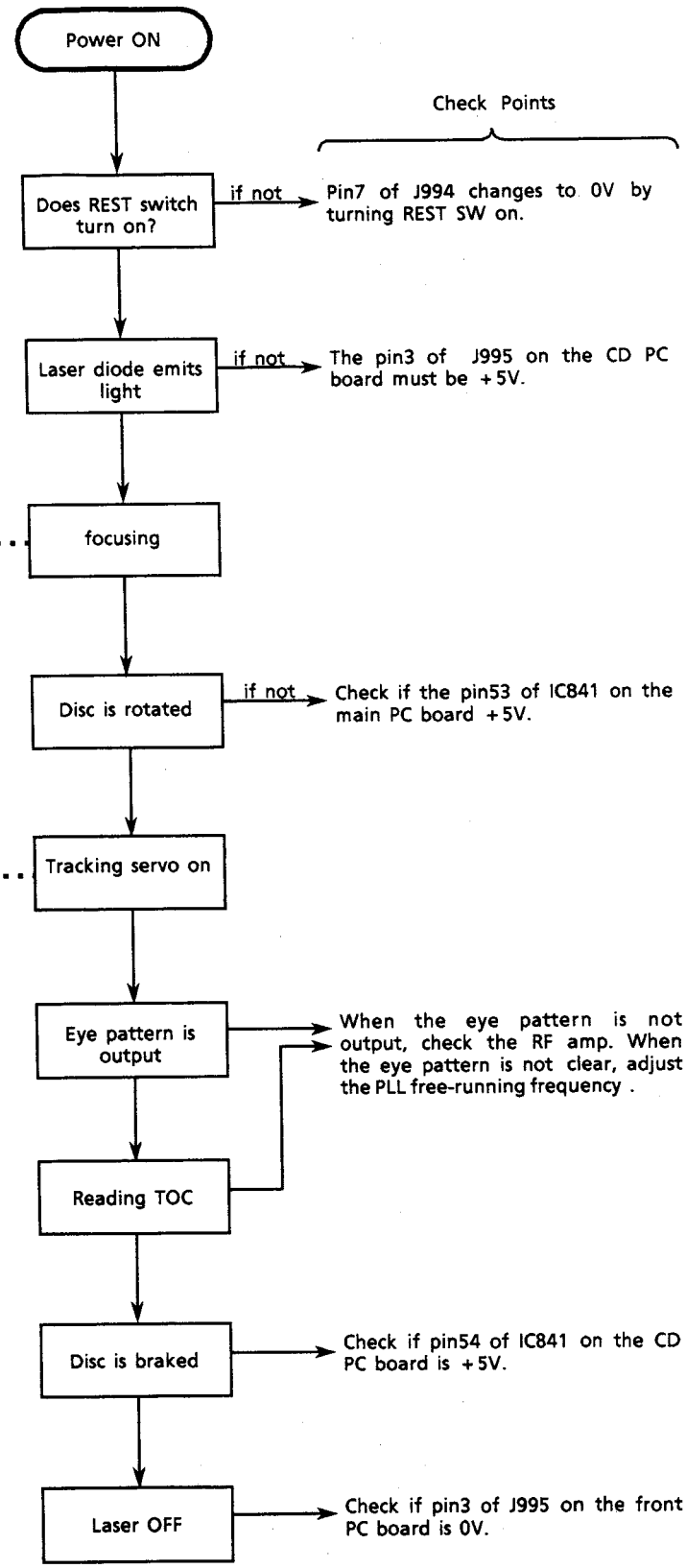


Fig-2

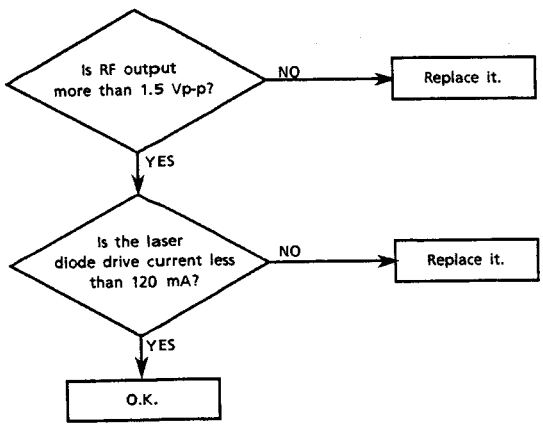

Power ON
Check Points
Does REST switch turn on?
if not
Pin7 of J994 changes to 0V by turning REST SW on.
Laser diode emits light
if not
The pin3 of J995 on the CD PC board must be +5V.
focusing
Disc is rotated
if not
Check if the pin53 of IC841 on the main PC board +5V.
Tracking servo on
Eye pattern is output
When the eye pattern is not output, check the RF amp. When the eye pattern is not clear, adjust the PLL free-running frequency .
Reading TOC
Disc is braked
Check if pin54 of IC841 on the CD PC board is +5V.
Laser OFF
Check if pin3 of J995 on the front PC board is 0V.

Maintenance of Laser Pickup

(1) Life of the laser diode

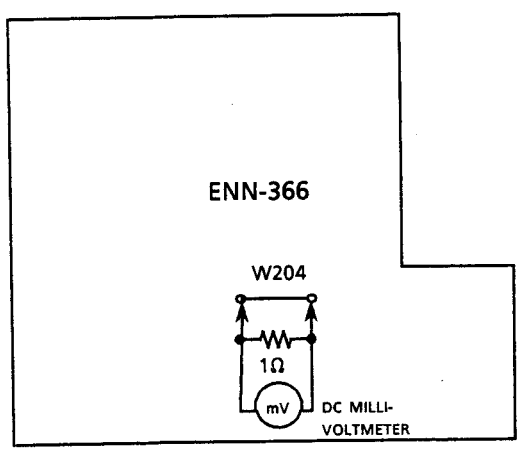
When the life of the laser diode has expired, the following symptoms will appear.

1. The level of RF output (EFM output: amplitude of eye pattern) will be low.
2. The drive current required by the laser diode will be increased.
   In such a case, check the life of the laser diode following the flowchart below



(2) Measurement of laser diode drive current

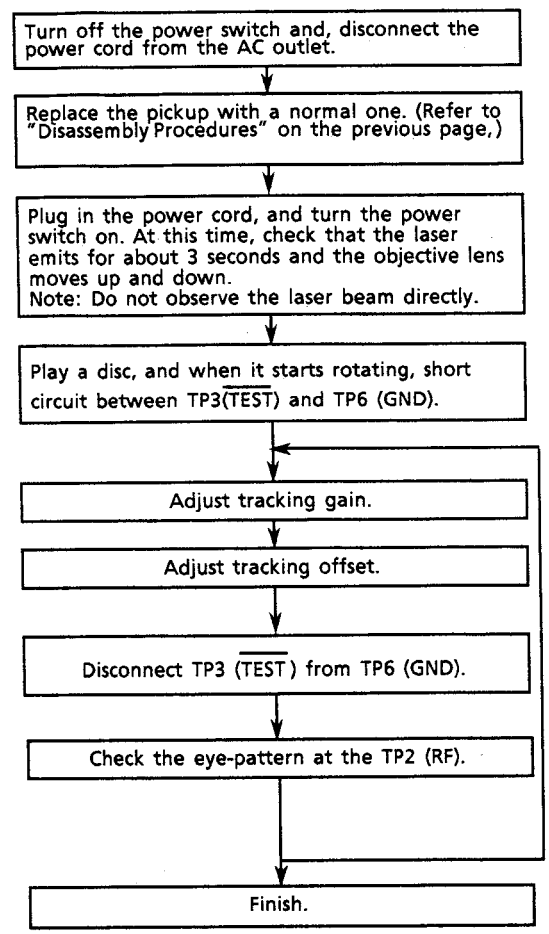
Replace W204 to a resister (1Ω).
Measure the voltage across the resistor with a milli-voltmeter. When the voltage is more than 150mV, it shows that the life of the laser diode has expired



(3) Semi-fixed resistor on the APC PC board

The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

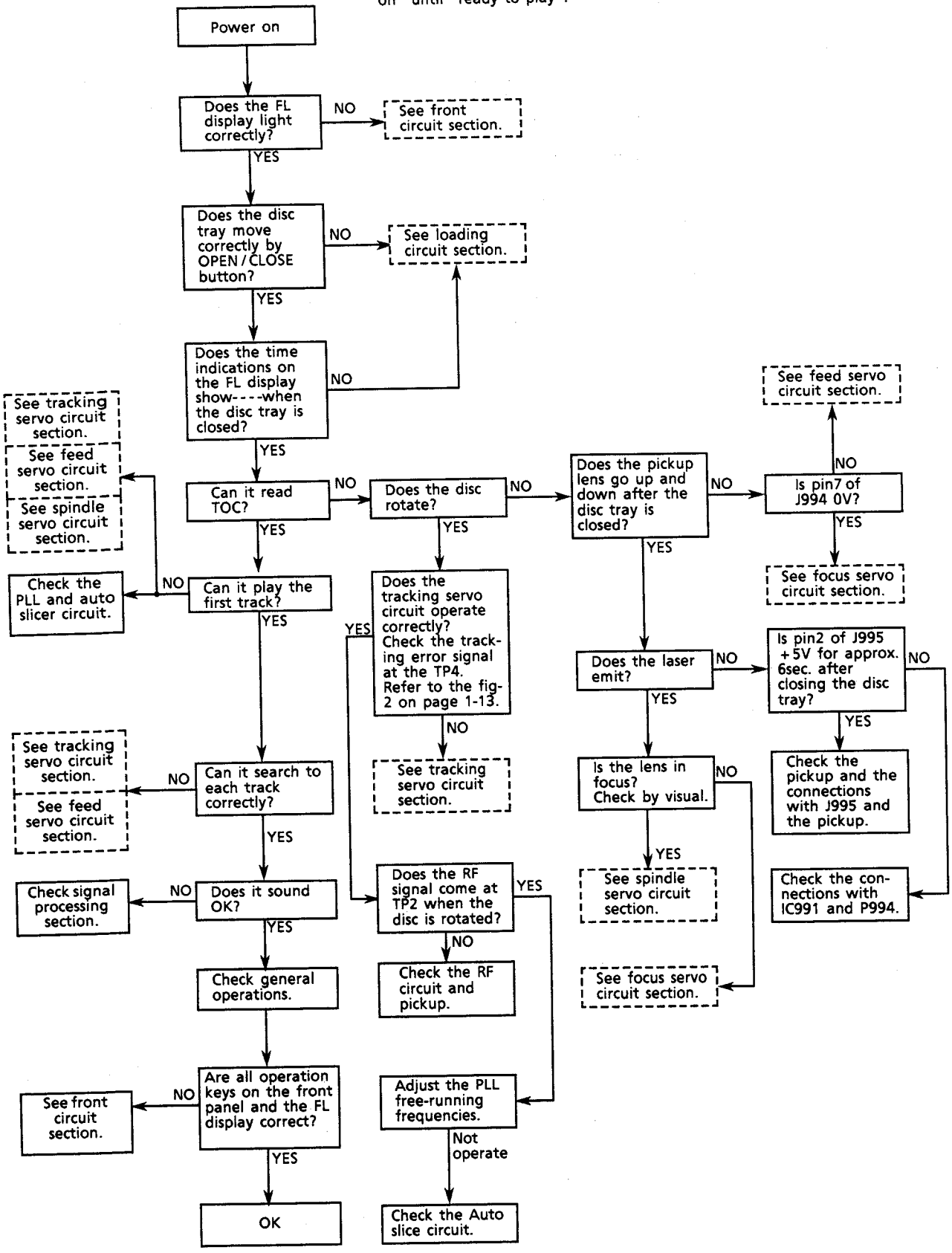
Replacement of Laser Pickup


Turn off the power switch and, disconnect the power cord from the AC outlet.
Replace the pickup with a normal one. (Refer to "Disassembly Procedures" on the previous page,)
Plug in the power cord, and turn the power switch on. At this time, check that the laser emits for about 3 seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc, and when it starts rotating, short circuit between TP3(TEST) and TP6 (GND).
Adjust tracking gain.
Adjust tracking offset.
Disconnect TP3 (TEST) from TP6 (GND).
Check the eye-pattern at the TP2 (RF).
Finish.

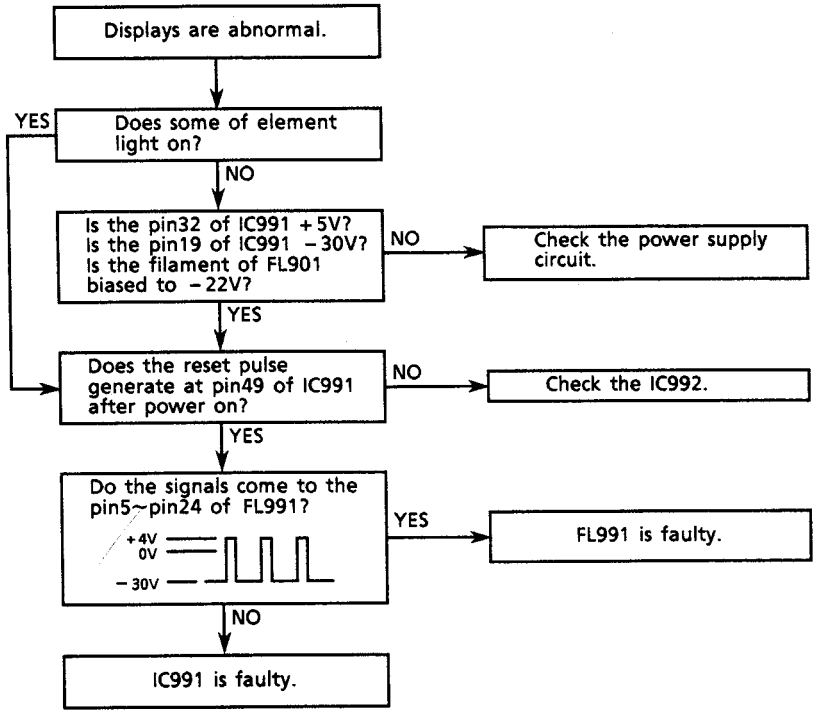
Note: Since one adjustment may affect other settings, repeat these adjustments a few times.

Troubleshooting

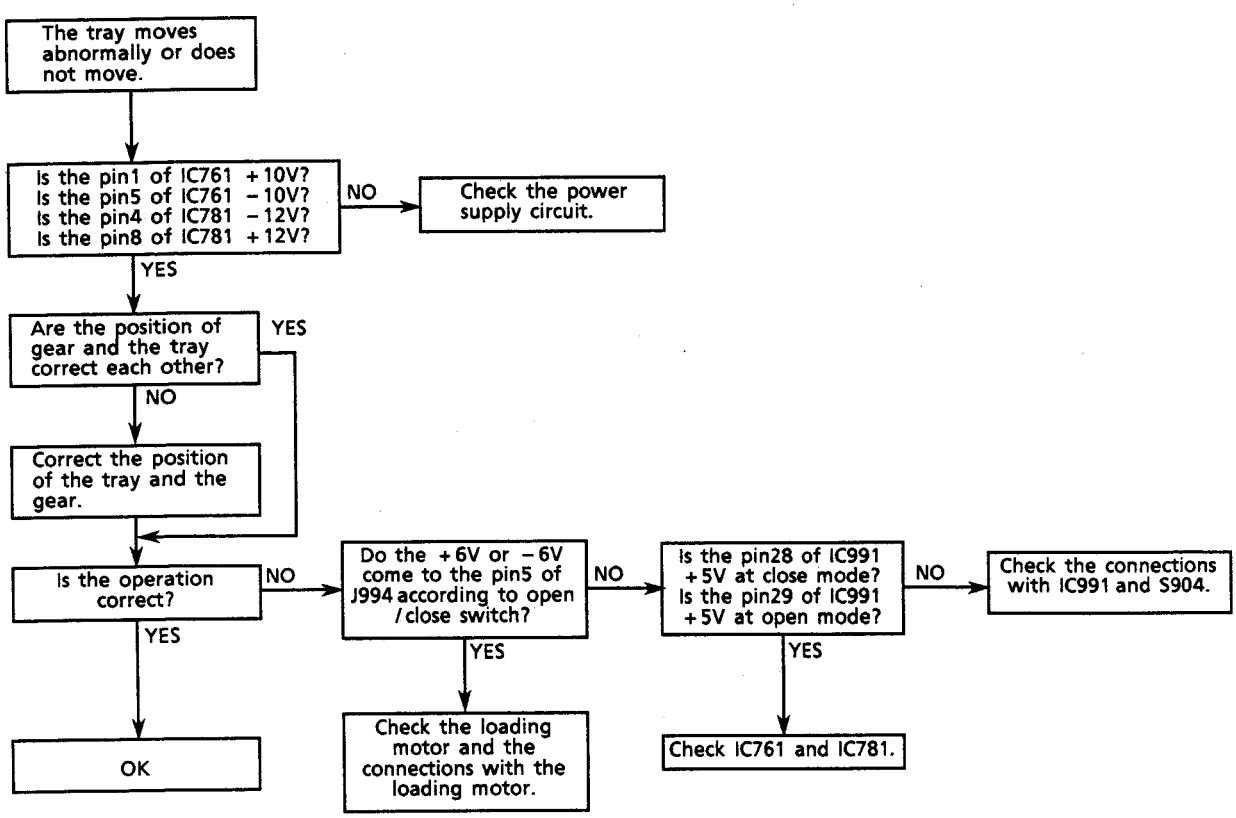
The following flowchart shows each circuit's condition about from "power on" until "ready to play".


Power on
Does the FL display light correctly?
NO
See front circuit section.
YES
Does the disc tray move correctly by OPEN / CLOSE button?
NO
See loading circuit section.
YES
Does the time indications on the FL display show----when the disc tray is closed?
NO
YES
See tracking servo circuit section.
See feed servo circuit section.
See spindle servo circuit section.
Can it read TOC?
NO
Does the disc rotate?
NO
Does the pickup lens go up and down after the disc tray is closed?
NO
See feed servo circuit section.
Is pin7 of J994 0V?
NO
YES
See focus servo circuit section.
YES
YES
YES
Check the PLL and auto slicer circuit.
NO
Can it play the first track?
YES
YES
Does the tracking servo circuit operate correctly? Check the tracking error signal at the TP4. Refer to the fig-2 on page 1-13.
NO
See tracking servo circuit section.
Does the laser emit?
NO
Is pin2 of J995 +5V for approx. 6sec. after closing the disc tray?
NO
YES
YES
See tracking servo circuit section.
See feed servo circuit section.
NO
Can it search to each track correctly?
YES
Is the lens in focus? Check by visual.
NO
Check the pickup and the connections with J995 and the pickup.
YES
YES
Check signal processing section.
NO
Does it sound OK?
YES
Does the RF signal come at TP2 when the disc is rotated?
YES
NO
Check the RF circuit and pickup.
See spindle servo circuit section.
Check the connections with IC991 and P994.
Check general operations.
See focus servo circuit section.
See front circuit section.
NO
Are all operation keys on the front panel and the FL display correct?
YES
Adjust the PLL free-running frequencies.
Not operate
OK
Check the Auto slice circuit.

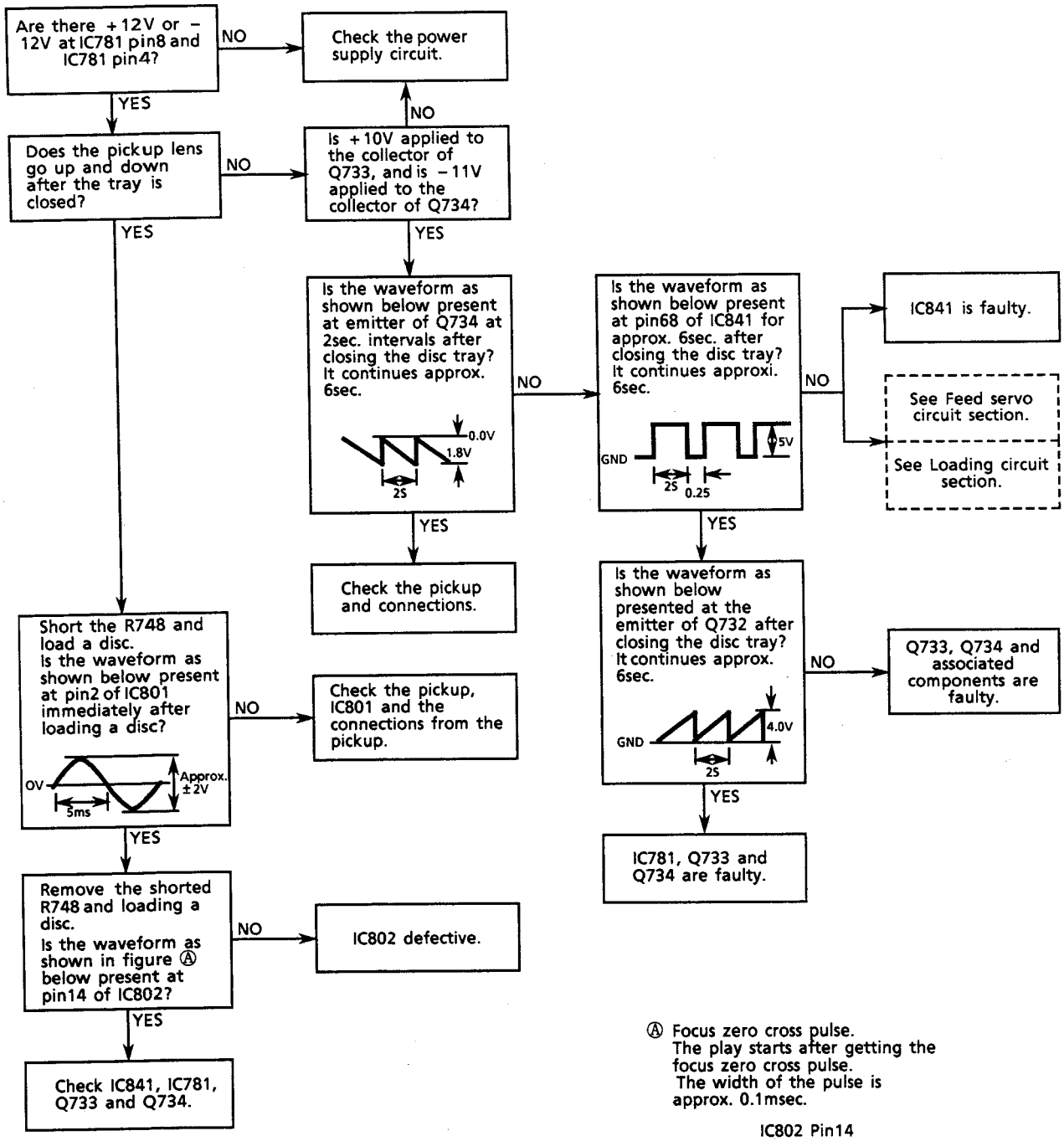
Front circuit section



Loading circuit section

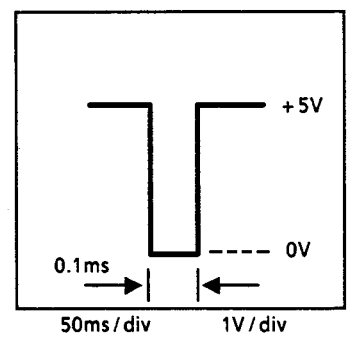

The tray moves abnormally or does not move.
Is the pin1 of IC761 +10V?
Is the pin5 of IC761 −10V?
Is the pin4 of IC781 −12V?
Is the pin8 of IC781 +12V?
NO
Check the power supply circuit.
YES
Are the position of gear and the tray correct each other?
YES
NO
Correct the position of the tray and the gear.
Is the operation correct?
NO
YES
OK
Do the +6V or −6V come to the pin5 of J994 according to open /close switch?
NO
YES
Check the loading motor and the connections with the loading motor.
Is the pin28 of IC991 +5V at close mode?
Is the pin29 of IC991 +5V at open mode?
NO
YES
Check IC761 and IC781.
Check the connections with IC991 and S904.

Focus servo circuit section

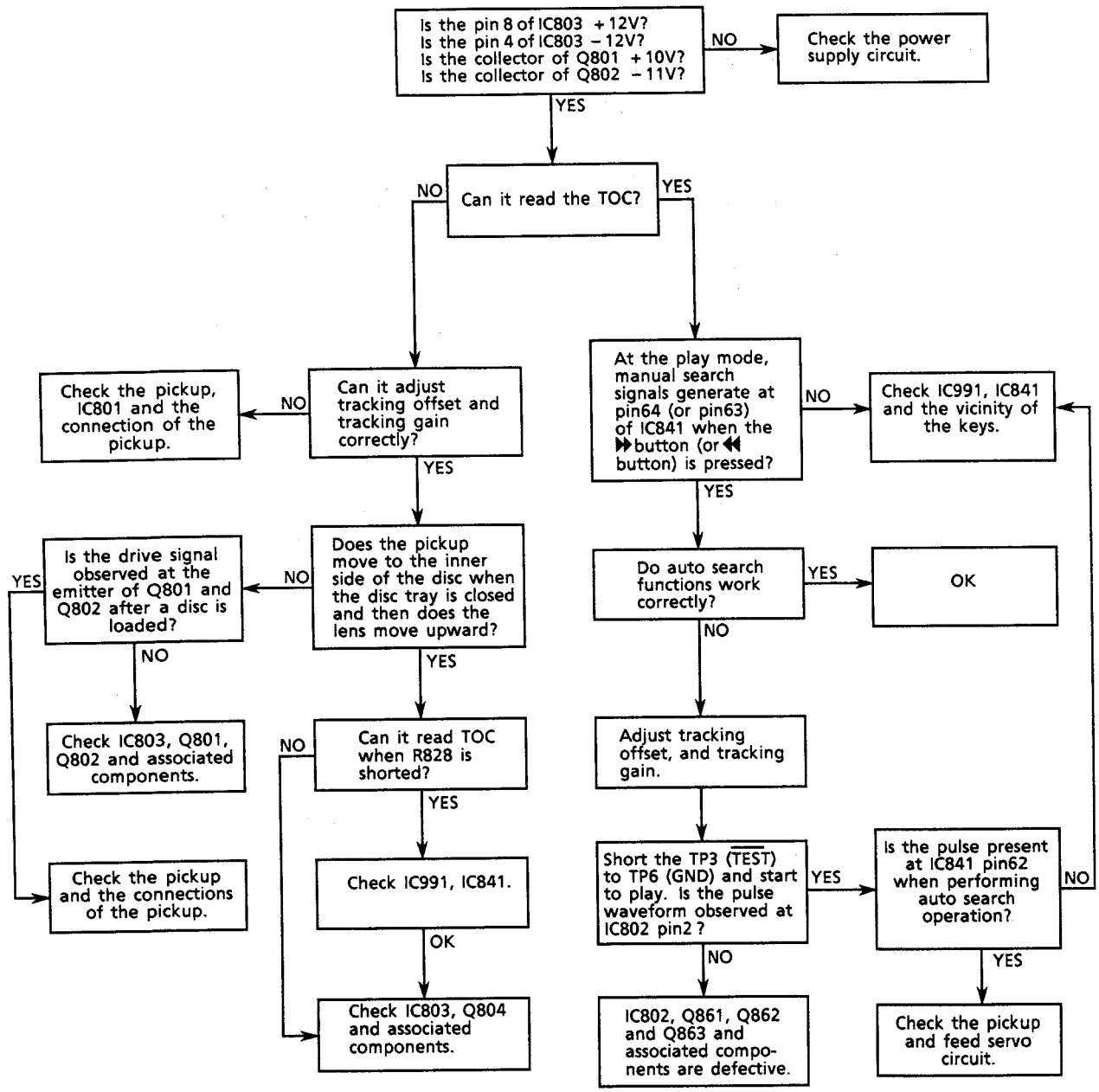

Are there +12V or −12V at IC781 pin8 and IC781 pin4?
NO
Check the power supply circuit.
YES
NO
Does the pickup lens go up and down after the tray is closed?
NO
Is +10V applied to the collector of Q733, and is −11V applied to the collector of Q734?
YES
YES
Is the waveform as shown below present at emitter of Q734 at 2sec. intervals after closing the disc tray? It continues approx. 6sec.
0.0V
1.8V
2S
NO
Is the waveform as shown below present at pin68 of IC841 for approx. 6sec. after closing the disc tray? It continues approxi. 6sec.
GND
5V
2S
0.25
NO
IC841 is faulty.
See Feed servo circuit section.
See Loading circuit section.
YES
YES
Check the pickup and connections.
Short the R748 and load a disc. Is the waveform as shown below present at pin2 of IC801 immediately after loading a disc?
OV
Approx. ±2V
5ms
NO
Check the pickup, IC801 and the connections from the pickup.
YES
Is the waveform as shown below presented at the emitter of Q732 after closing the disc tray? It continues approx. 6sec.
GND
4.0V
2S
NO
Q733, Q734 and associated components are faulty.
YES
IC781, Q733 and Q734 are faulty.
Remove the shorted R748 and loading a disc. Is the waveform as shown in figure Ⓐ below present at pin14 of IC802?
NO
IC802 defective.
YES
Check IC841, IC781, Q733 and Q734.

Ⓐ Focus zero cross pulse.
The play starts after getting the focus zero cross pulse.
The width of the pulse is approx. 0.1msec.

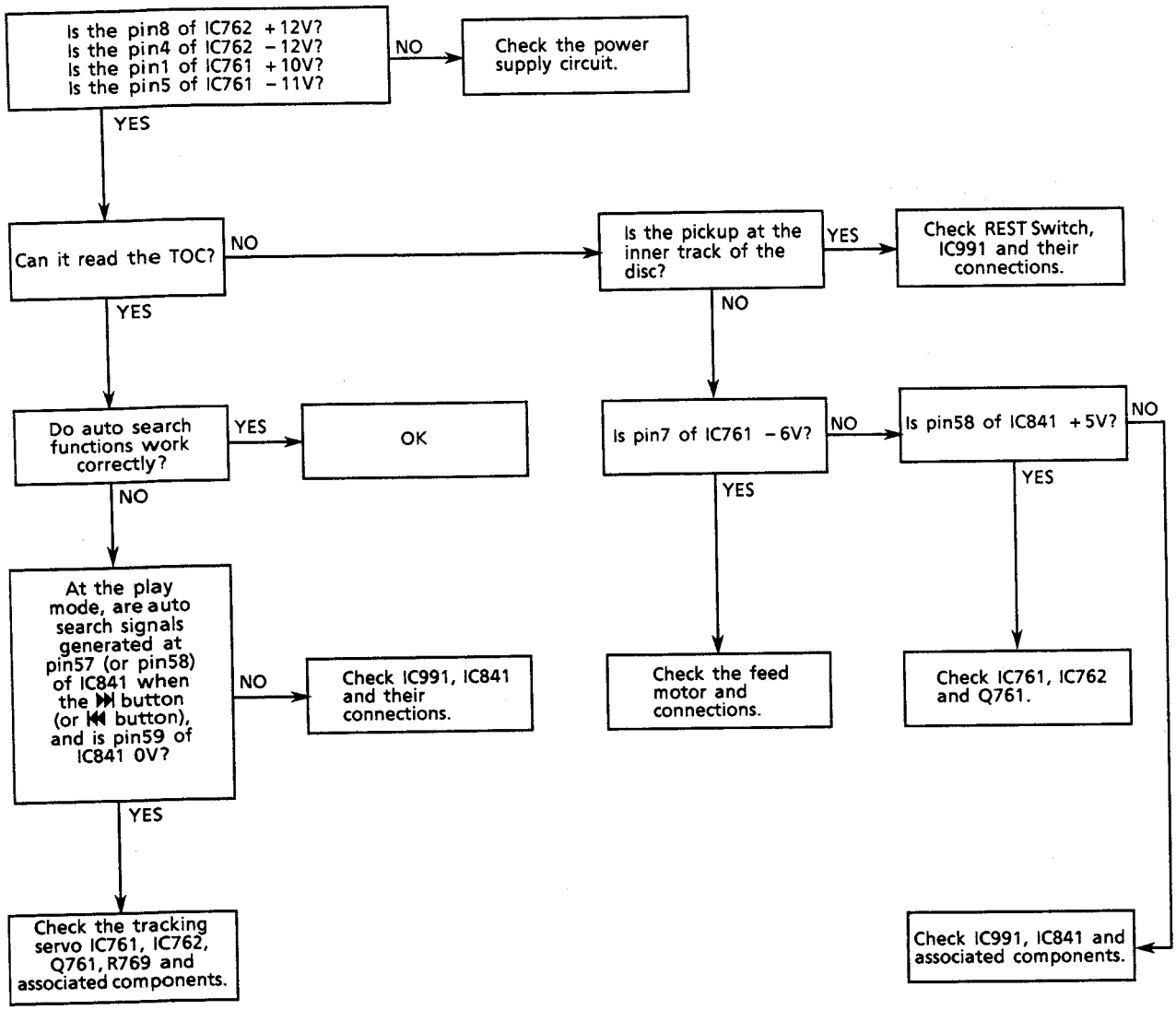
IC802 Pin14



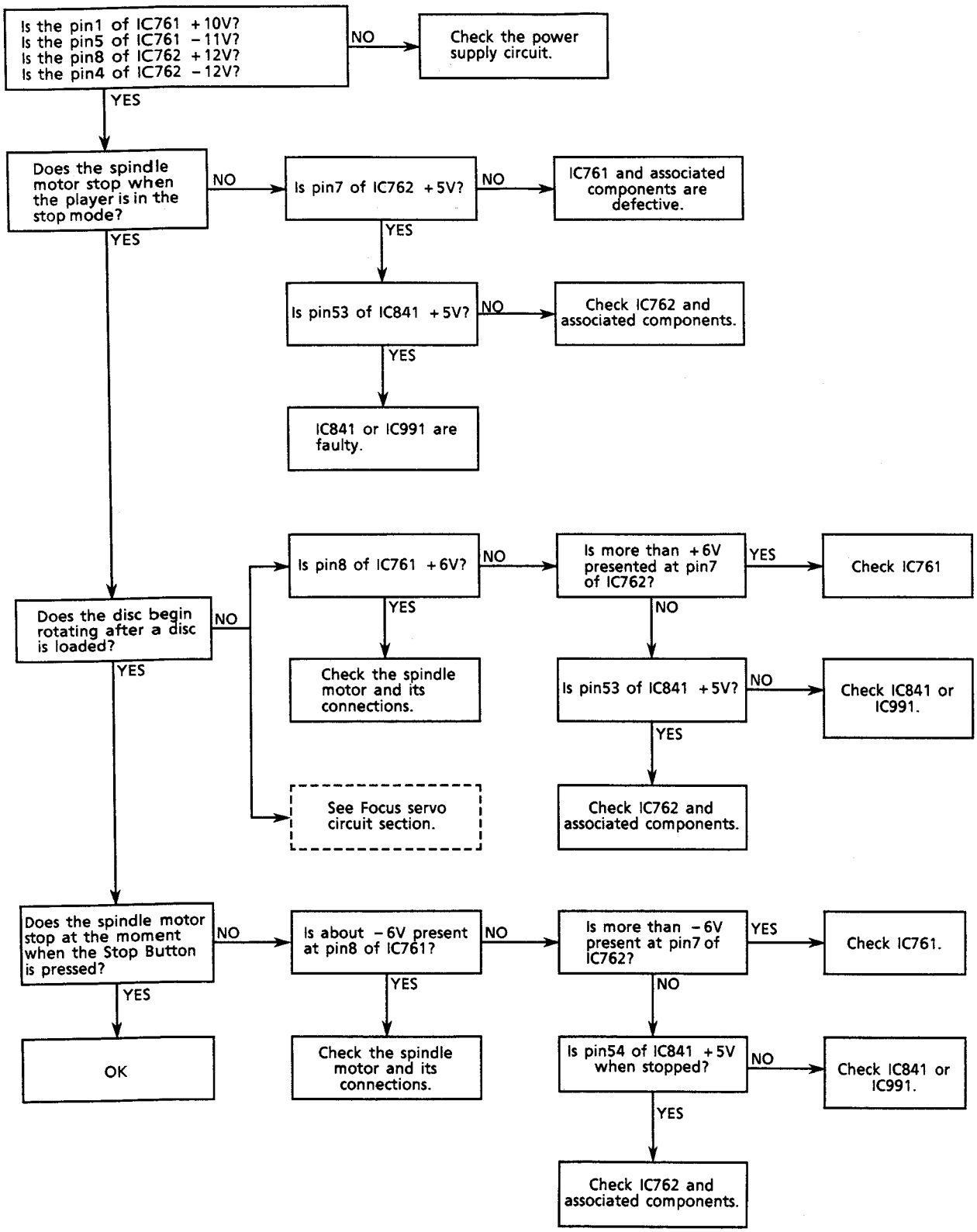
Tracking servo circuit section


Is the pin 8 of IC803 +12V?
Is the pin 4 of IC803 −12V?
Is the collector of Q801 +10V?
Is the collector of Q802 −11V?
NO
Check the power supply circuit.
YES
NO
Can it read the TOC?
YES
Check the pickup, IC801 and the connection of the pickup.
NO
Can it adjust tracking offset and tracking gain correctly?
YES
At the play mode, manual search signals generate at pin64 (or pin63) of IC841 when the ▶▶ button (or ◀◀ button) is pressed?
NO
Check IC991, IC841 and the vicinity of the keys.
YES
Is the drive signal observed at the emitter of Q801 and Q802 after a disc is loaded?
YES
NO
Does the pickup move to the inner side of the disc when the disc tray is closed and then does the lens move upward?
NO
YES
Do auto search functions work correctly?
YES
OK
NO
Check IC803, Q801, Q802 and associated components.
NO
Can it read TOC when R828 is shorted?
YES
Adjust tracking offset, and tracking gain.
Check the pickup and the connections of the pickup.
Check IC991, IC841.
OK
Short the TP3 (TEST) to TP6 (GND) and start to play. Is the pulse waveform observed at IC802 pin2 ?
YES
Is the pulse present at IC841 pin62 when performing auto search operation?
NO
YES
NO
Check IC803, Q804 and associated components.
IC802, Q861, Q862 and Q863 and associated components are defective.
Check the pickup and feed servo circuit.

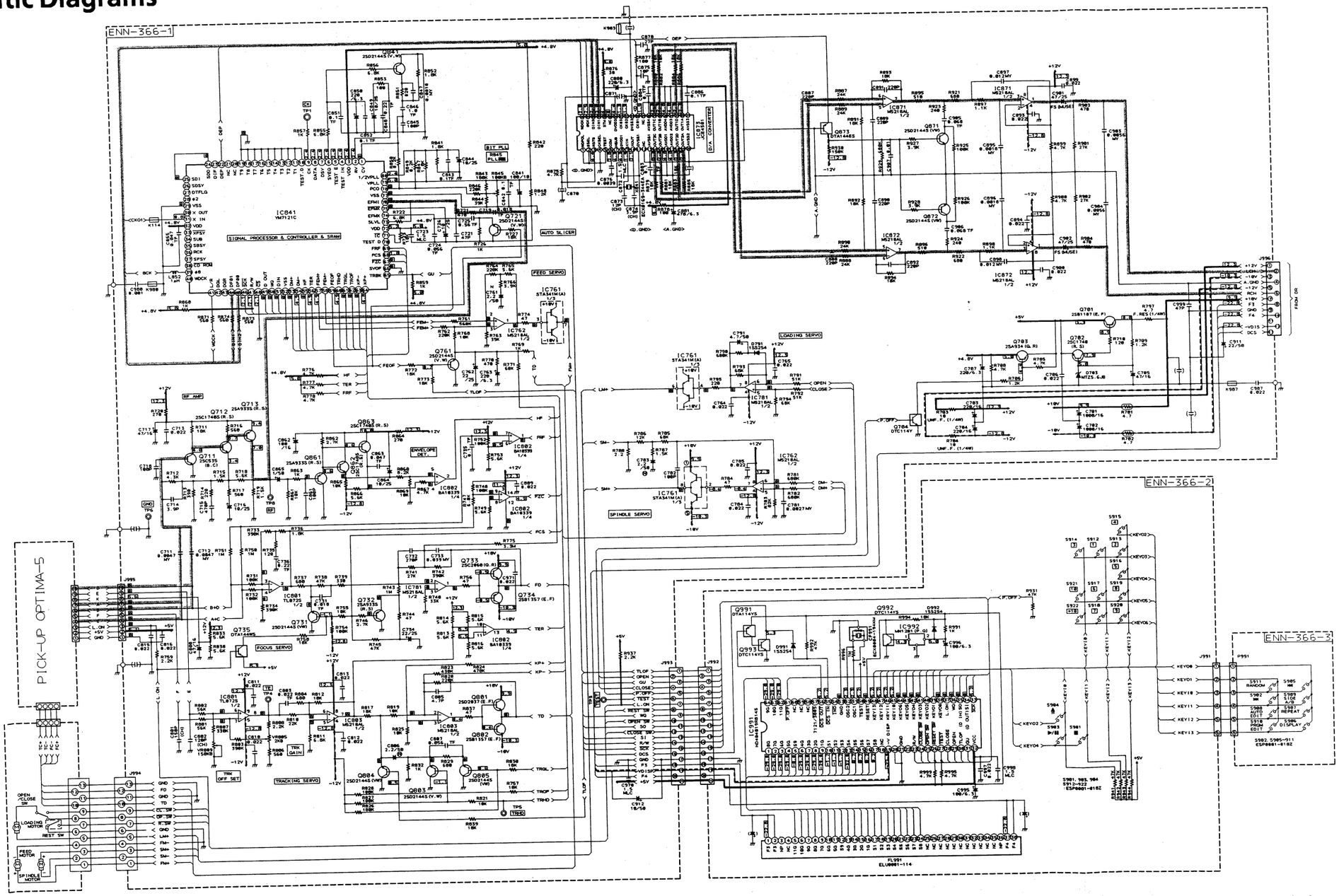
Feed servo circuit section


Is the pin8 of IC762 +12V?
Is the pin4 of IC762 −12V?
Is the pin1 of IC761 +10V?
Is the pin5 of IC761 −11V?
NO
Check the power supply circuit.
YES
Can it read the TOC?
NO
YES
Is the pickup at the inner track of the disc?
YES
Check REST Switch, IC991 and their connections.
NO
Do auto search functions work correctly?
YES
OK
NO
Is pin7 of IC761 −6V?
NO
Is pin58 of IC841 +5V?
NO
YES
YES
At the play mode, are auto search signals generated at pin57 (or pin58) of IC841 when the ⏭ button (or ⏮ button), and is pin59 of IC841 0V?
NO
Check IC991, IC841 and their connections.
Check the feed motor and connections.
Check IC761, IC762 and Q761.
YES
Check the tracking servo IC761, IC762, Q761, R769 and associated components.
Check IC991, IC841 and associated components.

Spindle servo circuit section



Schematic Diagrams

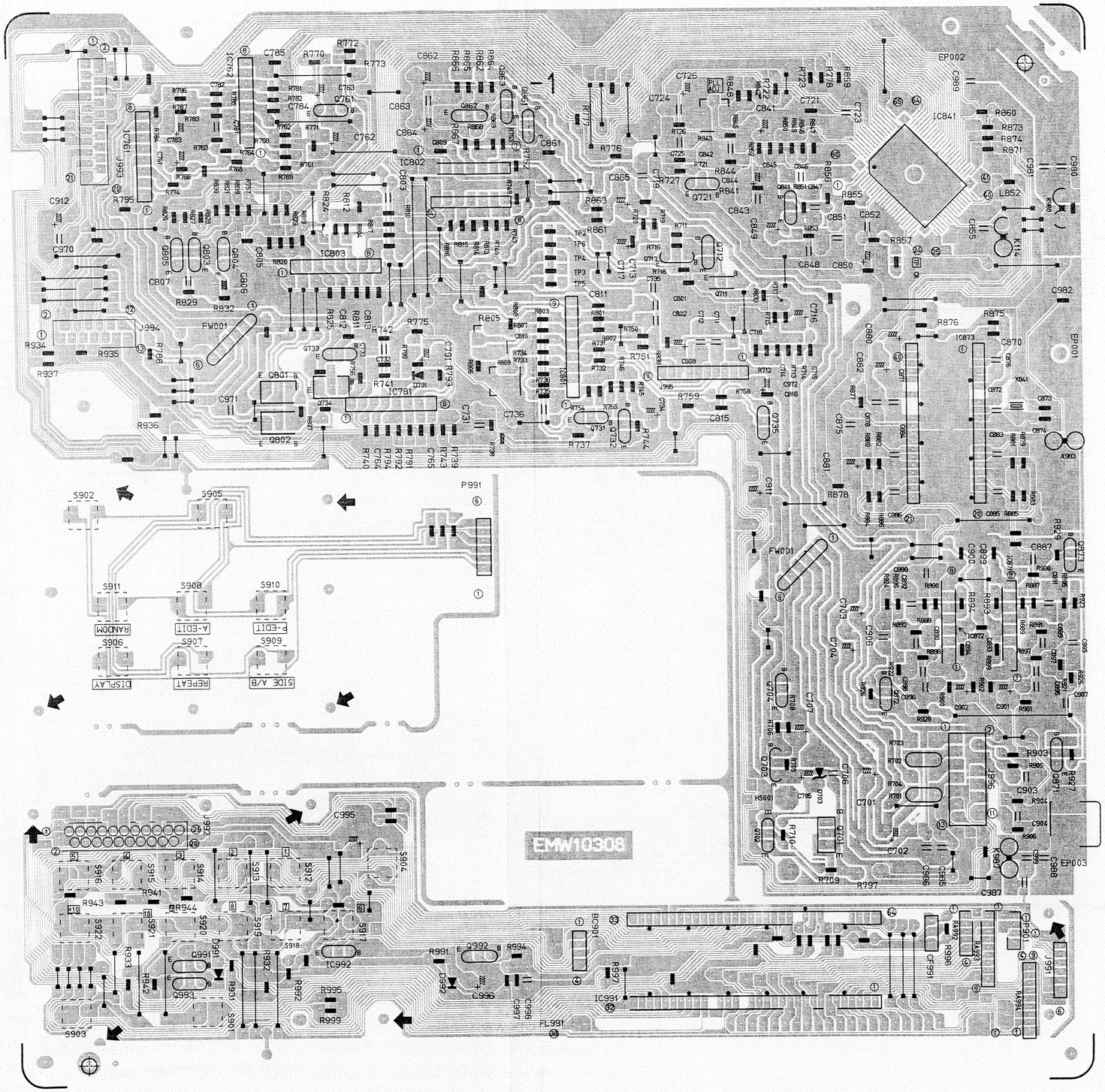


Notes:

1. —— indicates + B power supply.
2. ····· indicates – B power supply.
3. ▬ indicates signal path.
4. ▬ show DC voltage to the chassis with no signal input. (Source Direct mode)
5. When replacing the parts in the darkened are (▬) and those marked with ⚠ ,be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram. The design and contents are subject to change without notice.

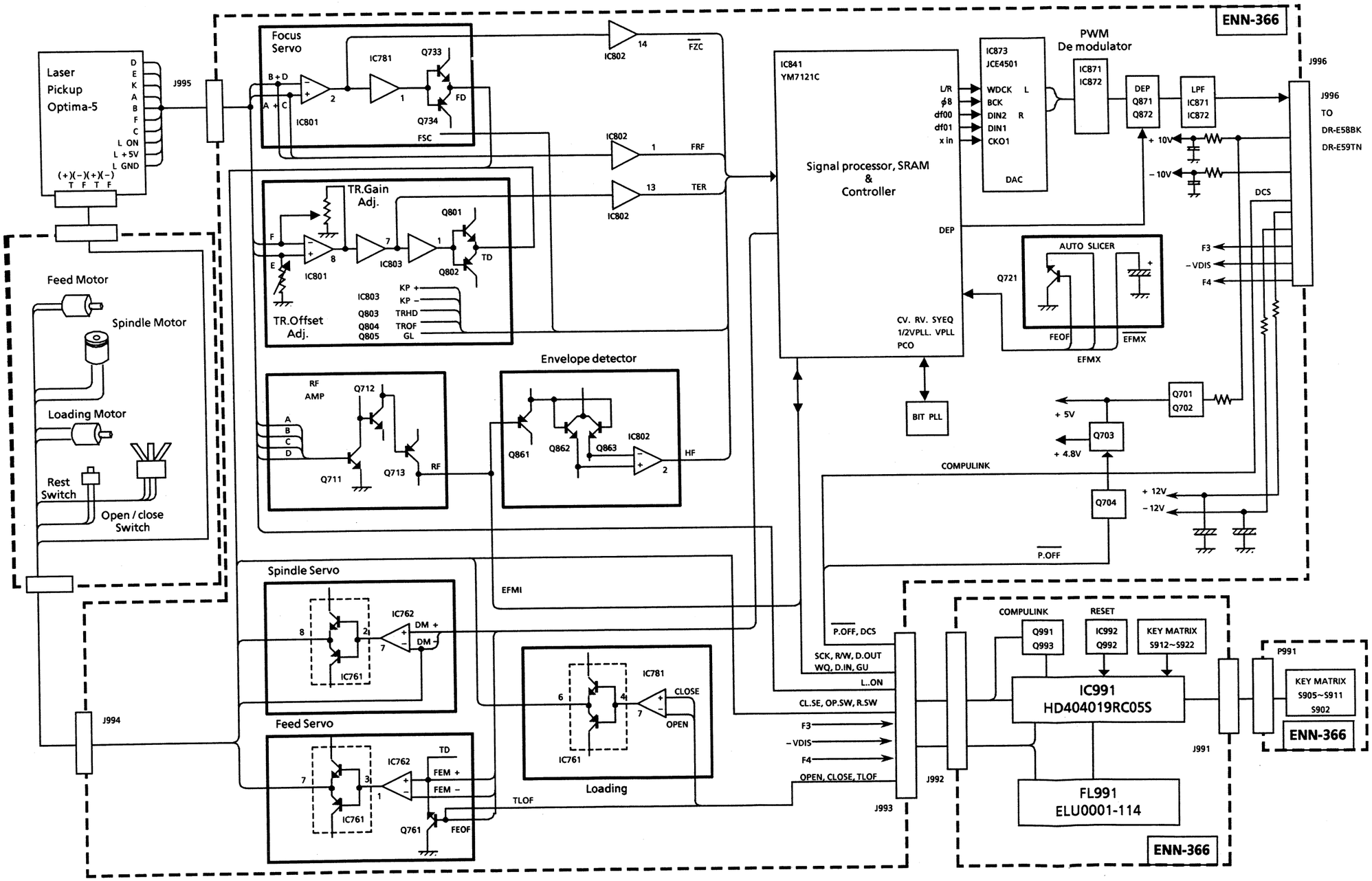
XL-E58BK XL-E59TN	XL-E58BK XL-E59TN

Printed Circuit Boards



(No. 20386) (No. 20386)

Block Diagrams



PARTS LIST

※ All printed circuit board assemblies are not arailable as service parts.

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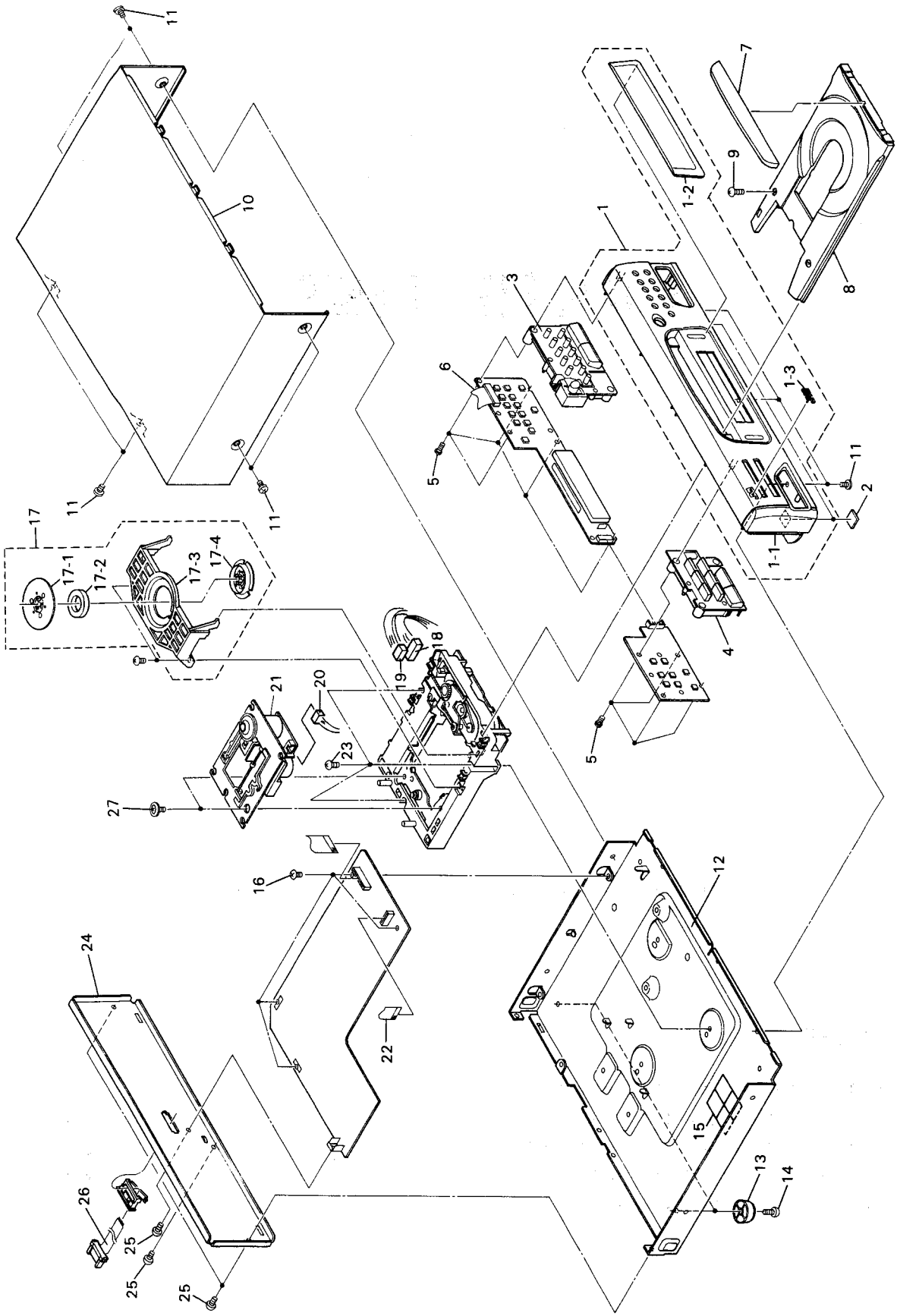
Printed Circuit Board Ass'y and Parts List 2-6
■ ENN-366 □ CD PC Board Ass'y 2-6
Packing Materials and Parts List 2-10

General Exploded View and Parts List

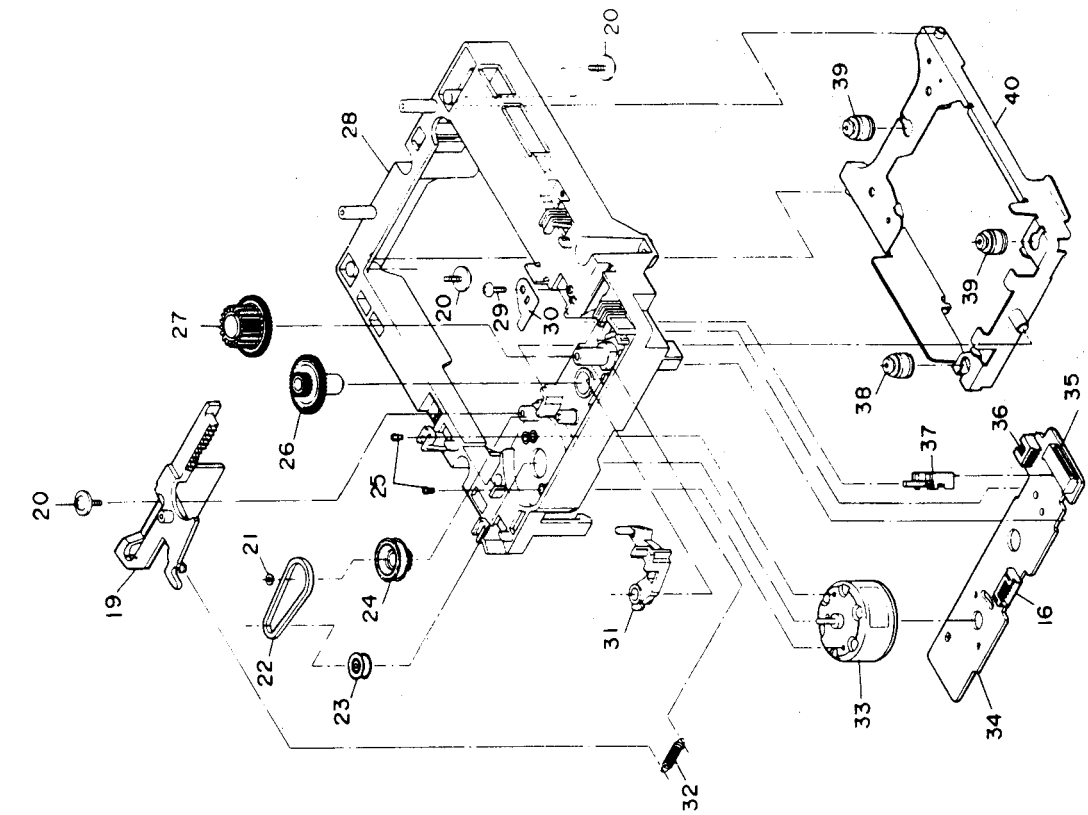


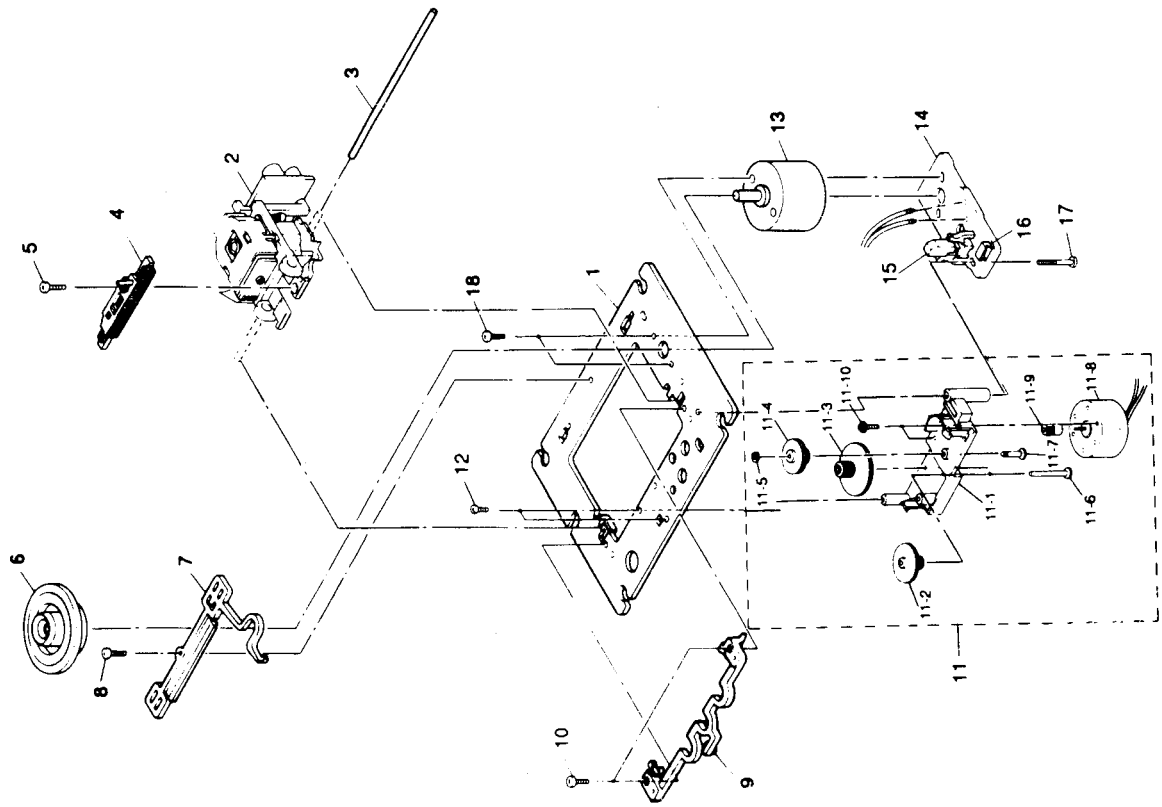
⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-XLE58BKE(S)	FRONT PANEL ASS'Y	1		
	1-1	E102656-002SS	FRONT PANEL	1		
	1-2	E308318-001SS	WINDOW SCREEN	1		
	1-3	E406971-221	JVC MARK	1		
	2	E75896-001	SPACER	2		
	3	E207720-002SS	PUSH BUTTON	1		
	4	E207721-004SS	PUSH BUTTON	1		
	5	SDSF2608Z	SCREW	9		
	6	EWR621G-15TTJ2	FLAT WIRE	1		
	7	E308316-002SS	CD FITTING	1		
	8	E12289-222SS	TRAY	1		
	9	SBSF3008M	SCREW	3		
	10	E26553-004SS	METAL COVER	1		
	11	SDSG3006M	SCREW	9		
	12	E102379-005SS	CHASSIS BASE	1		
	13	E47227-020	FOOT	2		
	14	SBSG3010Z	SCREW	2		
	15	E406507-001	CAUTION LABEL	1		
	16	SBSG3008CC	SCREW	4		
	17	E306837-003	CLAMPER BASE ASSY	1		
	17-1	E306836-003	CD YOKE	1		
	17-2	E74897-002	MAGNET	1		
	17-3	E26756-001	CLAMPER BASE	1		
	17-4	E306835-001	CLAMPER	1		
	18	EWS25A-B303	SOCKET WIRE	1		
	19	EWS254-B103	SOCKET WIRE	1		
	20	EWS256-B102	SOCKET WIRE	1		
	21	----------	CD MECHANISM ASSY	2		
	22	EWR613E-10TTJ2	FLAT WIRE	1		
	23	SBST3006Z	SCREW	3		
	24	E26446-004SS	REAR PANEL	1		Except U
		E26446-006SS	REAR PANEL	1		U
	-	E407136-001	RATING LABEL	1		U
	25	E73273-003	SCREW	4		
	26	EWP907-009	FLAT WIRE ASSY	1		
	27	E75871-003	SCREW	2		
	-	E61029-005	NUMBER LABEL	1		
	-	E70891-001	LABEL	1		
	-	E70027-001	LABEL	1		EN

The Marks for Designated Areas

G ..... Germany
EF .... Continental Europe
U ..... Universal
EN .... Scandinavia
BS ..... the U.K.
No mark indicates all area.

CD Mechanism Ass'y and Parts List





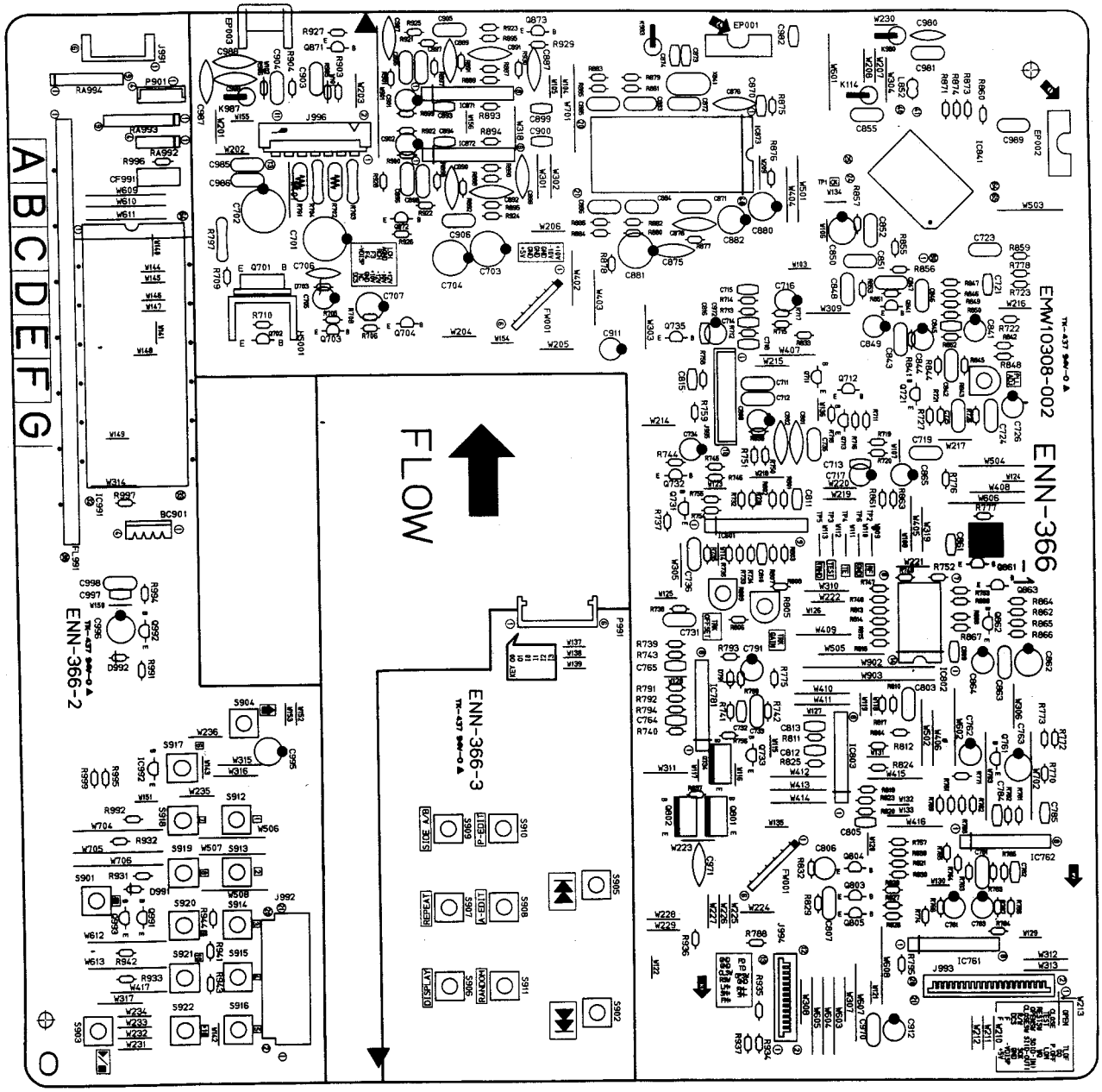
■ Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	E26487-003	Mechanism Base	1		
2	OPTIMA-5S	Pick up Ass'y	1		
3	E74930-003	Shaft	1		
4	E306282-001	Rack Ass'y	1		
5	SPSH2050M	Screw	1		
6	E406064-002	Turn Table Ass'y	1		
7	E306275-003	Support	1		
8	SDST2005Z	Screw	1		
9	E306277-001	Holder	1		
10	SDST2004Z	Screw	2		
11	SE10351-11	Gear Ass'y	1		
11-1	E306276-001	Gear Base	1		
11-2	E75444-001	Gear	1		
11-3	E75443-001	Gear	1		
11-4	E75445-001	Gear	1		
11-5	WDM163550	Slit Washer	1		
11-6	E75494-003	Shaft	2		
11-7	E75494-002	Shaft	1		
11-8	HKN-3A6RDNV	Feed Motor	1		
11-9	E75493-001	Pinion Gear	1		
11-10	LPSH1735Z	Screw	2		
12	E72713-001	Special Screw	2		
13	E74539-001B	Spindle Motor	1		
14	E12114-005 (S)	Circuit Board	1		
15	ESB1100-005	Leaf Switch	1	S001	
16	EMV5109-006B	6P Plug Ass'y	2	P011	
17	E75832-001	Special Screw	1		
18	SDSP2003N	Screw	2		
19	E306834-001	Cam	1		
20	E65923-003	Special Screw	3		
21	E72024-001	Speed Nut	1		
22	E75950-002	Belt	1		
23	E75984-001	Motor Pulley	1		
24	E75985-001	Gear (1)	1		
25	SPSK2640Z	Screw	2		
26	E75986-002	Gear (2)	1		
27	E75987-001	Gear (3)	1		
28	E12288-002	Loading Base	1		
29	SBSF3008Z	Screw	1		
30	E75988-001	Plate	1		
31	E306833-001	Lever	1		
32	E75989-001	Spring	1		
33	MMN-6F1LB8Q	Loading Motor	1		
34	EMW10060-002 (S)	Circuit Board	1		
35	EMV7123-013R	Connector	1	13Pin	
36	EMV5109-004B	Plug Ass'y	1	4Pin	
37	ESS1200-002	Switch	1		
38	E75609-002	Insulator	1		
39	E75609-001	Insulator	2		
40	E307087-001	Elevator Base Ass'y	1		

Printed Circuit Board Ass'y and Parts List

■ENN-366 □ CD PC Board Ass'y

Note : ENN-366 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENN-366 B	the U.K. Continental Europe Scandinavia Universal Type
ENN-366 C	Germany

TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q701	2SB1187(E,F)	SILICON ROHM	
	Q702	2SC1740(R,S)	SILICON ROHM	
	Q703	2SA934(Q,R)	SILICON ROHM	
	Q704	DTC114YS	SILICON ROHM	
	Q711	2SC535(B,C)	SILICON HITACHI	
	Q712	2SC1740S(R,S)	SILICON ROHM	
	Q713	2SA933S(R,S)	SILICON ROHM	
	Q721	2SD2144S(VW)	SILICON ROHM	
	Q731	2SD2144S(VW)	SILICON ROHM	
	Q732	2SA933S(R,S)	SILICON ROHM	
	Q733	2SC2060(Q,R)	SILICON ROHM	
	Q734	2SB1357(E,F)	SILICON ROHM	
	Q735	DTA144WS	SILICON ROHM	
	Q761	2SD2144S(VW)	SILICON ROHM	
	Q801	2SD2037(E,F)	SILICON ROHM	
	Q802	2SB1357(E,F)	SILICON ROHM	
	Q803	2SD2144S(VW)	SILICON ROHM	
	Q804	2SD2144S(VW)	SILICON ROHM	
	Q805	2SD2144S(VW)	SILICON ROHM	
	Q841	2SD2144S(VW)	SILICON ROHM	
	Q861	2SA933S(R,S)	SILICON ROHM	
	Q862	2SC1740S(R,S)	SILICON ROHM	
	Q863	2SC1740S(R,S)	SILICON ROHM	
	Q871	2SD2144S(VW)	SILICON ROHM	
	Q872	2SD2144S(VW)	SILICON ROHM	
	Q873	DTA144ES	SILICON ROHM	
	Q991	DTA114YS	SILICON ROHM	
	Q992	DTC114YS	SILICON ROHM	
	Q993	DTC114YS	SILICON ROHM	

⚠ : SAFETY PARTS

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC761	STA341M(A)	I.C. SANKEN	
	IC762	M5218AL	I.C. MITSUBISHI	
	IC781	M5218AL	I.C. MITSUBISHI	
	IC801	NJM072S	I.C. DAINICHI	
	IC802	BA10339	I.C. ROHM	
	IC803	M5218AL	I.C. MITSUBISHI	
	IC841	YM7121C	I.C. YAMAHA	
	IC871	M5218AL	I.C. MITSUBISHI	
	IC872	M5218AL	I.C. MITSUBISHI	
	IC873	JCE4501	I.C. MATSUSHITA	
	IC991	HD404019RC05S	I.C. HITACHI	
	IC992	MN1281(P,Q)	I.C. MATSUSHITA	

⚠ : SAFETY PARTS

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D703	MTZ5.6JB	ZENER ROHM	
	D791	1SS254	SILICON ROHM	
	D991	1SS254	SILICON ROHM	
	D992	1SS254	SILICON ROHM	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C701	QETB1CM-108	1000MF 16V ELECTRO	
	C702	QETB1CM-108	1000MF 16V ELECTRO	
	C703	QETB1CM-227	220MF 16V ELECTRO	
	C704	QETB1CM-227	220MF 16V ELECTRO	
	C705	QETB1CM-476	47MF 16V ELECTRO	
	C706	QCF21HP-223	0.022MF 50V CERAMIC	
	C707	QETB0JM-227	220MF 6.3V ELECTRO	
	C711	QFN81HJ-472	4700PF 50V MYLAR	
	C712	QFN81HJ-472	4700PF 50V MYLAR	
	C713	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C714	QCSB1HK-3R9	3.9PF 50V CERAMIC	
	C715	QCBB1HK-471	470PF 50V CERAMIC	
	C716	QETB1EM-106	10MF 25V ELECTRO	
	C717	QETB1CM-476	47MF 16V ELECTRO	
	C718	QCBB1HK-101	100PF 50V CERAMIC	
	C719	QFLB1HJ-183	0.018MF 50V MYLAR	
	C721	QCSB1HJ-470	47PF 50V CERAMIC	
	C723	QCZ0202-155	1.5MF 25V CERAMIC	
	C724	QFLB1HJ-563	0.056MF 50V MYLAR	
	C725	QFV81HJ-564	0.56MF 50V T.FILM	
	C726	QETB1EM-106	10MF 25V ELECTRO	
	C731	QFLB1HJ-183	0.018MF 50V MYLAR	
	C732	QCBB1HK-271	270PF 50V CERAMIC	
	C733	QFN81HJ-393	0.039MF 50V MYLAR	
	C734	QETB1EM-226	22MF 25V ELECTRO	
	C735	QFLB1HJ-104	0.1MF 50V MYLAR	
	C736	QFV81HJ-224	0.22MF 50V T.FILM	
	C761	QEN51HM-225	2.2MF 50V NON POLE	
	C762	QETB1EM-226	22MF 25V ELECTRO	
	C763	QETB0JM-227	220MF 6.3V ELECTRO	
	C764	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C765	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C781	QFN81HJ-272	2700PF 50V MYLAR	
	C782	QCBB1HK-101	100PF 50V CERAMIC	
	C783	QEN51HM-225	2.2MF 50V NON POLE	
	C784	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C785	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C791	QETB1HM-475	4.7MF 50V ELECTRO	
	C801	QCT26CH-151	150PF 50V CERAMIC	
	C802	QCT26CH-121	120PF 50V CERAMIC	
	C803	QFLB1HJ-223	0.022MF 50V MYLAR	
	C805	QCSB1HK-4R7	4.7PF 50V CERAMIC	
	C806	QEN51HM-225	2.2MF 50V NON POLE	
	C807	QFLB1HJ-563	0.056MF 50V MYLAR	
	C808	QETB1CM-476	47MF 16V ELECTRO	
	C809	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C810	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C811	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C812	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C813	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C815	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C816	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C841	QETB1AM-107	100MF 10V ELECTRO	
	C842	QFLB1HJ-104	0.1MF 50V MYLAR	
	C843	QFLB1HJ-104	0.1MF 50V MYLAR	
	C844	QETB1EM-106	10MF 25V ELECTRO	
	C845	QCBB1HK-101	100PF 50V CERAMIC	
	C846	QFV81HJ-105	1MF 50V T.FILM	
	C847	QFN81HJ-182	1800PF 50V MYLAR	
	C848	QFV81HJ-224	0.22MF 50V T.FILM	
	C849	QETB1EM-106	10MF 25V ELECTRO	
	C850	QETB0JM-227	220MF 6.3V ELECTRO	
	C851	QFLB1HJ-104	0.1MF 50V MYLAR	
	C852	QFLB1HJ-104	0.1MF 50V MYLAR	
	C855	QFLB1HJ-473	0.047MF 50V MYLAR	
	C861	QCBB1HK-101	100PF 50V CERAMIC	
	C862	QETB1CM-107	100MF 16V ELECTRO	
	C863	QFLB1HJ-473	0.047MF 50V MYLAR	
	C864	QETB1EM-106	10MF 25V ELECTRO	
	C865	QETB1HM-105	1MF 50V ELECTRO	
	C871	QFLB1HJ-104	0.1MF 50V MYLAR	
	C872	QCZ0202-155	1.5MF 25V CERAMIC	
	C873	QCT30CH-120	12PF 50V CERAMIC	
	C874	QCT30CH-3R9	3.9PF 50V CERAMIC	
	C875	QCS21HJ-100	10PF 50V CERAMIC	
	C876	QCY21HK-392	3900PF 50V CERAMIC	
	C878	QCS21HJ-5R0	5PF 50V CERAMIC	
	C880	QETB0JM-227	220MF 6.3V ELECTRO	
	C881	QETB0JM-477	470MF 6.3V ELECTRO	
	C883	QFLB1HJ-104	0.1MF 50V MYLAR	
	C884	QFLB1HJ-104	0.1MF 50V MYLAR	
	C886	QFLB1HJ-104	0.1MF 50V MYLAR	
	C887	QCS21HJ-221	220PF 50V CERAMIC	
	C888	QCS21HJ-221	220PF 50V CERAMIC	
	C889	QCS21HJ-221	220PF 50V CERAMIC	
	C890	QCS21HJ-221	220PF 50V CERAMIC	
	C891	QCS21HJ-221	220PF 50V CERAMIC	
	C892	QCS21HJ-221	220PF 50V CERAMIC	
	C893	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C894	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C895	QFN81HJ-182	1800PF 50V MYLAR	
	C896	QFN81HJ-182	1800PF 50V MYLAR	
	C897	QFV81HJ-123	0.012MF 50V T.FILM	
	C898	QFV81HJ-123	0.012MF 50V T.FILM	
	C899	QCHB1EZ-223	0.022MF 25V CERAMIC	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C900	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C901	QETB1EM-476	47MF 25V ELECTRO	
	C902	QETB1EM-476	47MF 25V ELECTRO	
	C903	QFN81HJ-562	5600PF 50V MYLAR	
	C904	QFN81HJ-562	5600PF 50V MYLAR	
	C905	QFLB1HJ-683	0.068MF 50V MYLAR	
	C906	QFLB1HJ-683	0.068MF 50V MYLAR	
	C907	QCF21HP-103	0.01MF 50V CERAMIC	
	C911	QETB1HM-226	22MF 50V ELECTRO	
	C912	QETB1HM-106	10MF 50V ELECTRO	
	C970	QCZ0202-155	1.5MF 25V CERAMIC	
	C971	QCF21HP-223	0.022MF 50V CERAMIC	
	C980	QCF21HP-102	1000PF 50V CERAMIC	C
	C987	QCF21HP-223	0.022MF 50V CERAMIC	
	C995	QER50JM-107	100MF 6.3V ELECTRO	
	C996	QETB1AM-107	100MF 10V ELECTRO	
	C997	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C998	QCZ0202-155	1.5MF 25V CERAMIC	
	C999	QCS21HJ-470	47PF 50V CERAMIC	C

⚠ :SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
⚠	R701	PTH61G25AR4R7M	FUSIBLE RE	SI
⚠	R702	PTH61G25AR4R7M	FUSIBLE RE	SI
⚠	R703	QRZ0077-100	10 1/4W FUSIBLE	
⚠	R704	QRZ0077-100	10 1/4W FUSIBLE	
	R705	QRD167J-472	4.7K 1/6W CARBON	
	R706	QRD167J-122	1.2K 1/6W CARBON	
	R708	QRD167J-472	4.7K 1/6W CARBON	
	R709	QRD167J-122	1.2K 1/6W CARBON	
	R710	QRD167J-121	120 1/6W CARBON	
	R711	QRD167J-183	18K 1/6W CARBON	
	R712	QRD167J-432	4.3K 1/6W CARBON	
	R713	QRD167J-391	390 1/6W CARBON	
	R714	QRD161J-221	220 1/6W CARBON	
	R715	QRD167J-152	1.5K 1/6W CARBON	
	R716	QRD167J-561	560 1/6W CARBON	
	R717	QRD167J-561	560 1/6W CARBON	
	R718	QRD167J-562	5.6K 1/6W CARBON	
	R719	QRD167J-152	1.5K 1/6W CARBON	
	R720	QRD167J-271	270 1/6W CARBON	
	R721	QRD167J-471	470 1/6W CARBON	
	R722	QRD167J-682	6.8K 1/6W CARBON	
	R723	QRD167J-103	10K 1/6W CARBON	
	R726	QRD167J-102	1K 1/6W CARBON	
	R727	QRD167J-183	18K 1/6W CARBON	
	R731	QRD167J-104	100K 1/6W CARBON	
	R732	QRD167J-104	100K 1/6W CARBON	
	R733	QRD167J-394	390K 1/6W CARBON	
	R734	QRD167J-394	390K 1/6W CARBON	
	R735	QRD167J-121	120 1/6W CARBON	
	R736	QRD167J-182	1.8K 1/6W CARBON	
	R737	QRD167J-681	680 1/6W CARBON	
	R738	QRD167J-473	47K 1/6W CARBON	
	R739	QRD167J-331	330 1/6W CARBON	
	R740	QRD167J-333	33K 1/6W CARBON	
	R741	QRD167J-273	27K 1/6W CARBON	
	R742	QRD167J-394	390K 1/6W CARBON	
	R743	QRD167J-105	1M 1/6W CARBON	
	R744	QRD167J-470	47 1/6W CARBON	
	R745	QRD167J-473	47K 1/6W CARBON	
	R746	QRD167J-272	2.7K 1/6W CARBON	
	R747	QRD167J-682	6.8K 1/6W CARBON	
	R748	QRD167J-104	100K 1/6W CARBON	
	R749	QRD167J-562	5.6K 1/6W CARBON	
	R750	QRD167J-105	1M 1/6W CARBON	
	R751	QRD167J-105	1M 1/6W CARBON	
	R752	QRD167J-104	100K 1/6W CARBON	
	R753	QRD167J-562	5.6K 1/6W CARBON	
	R754	QRD167J-104	100K 1/6W CARBON	
	R755	QRD167J-103	10K 1/6W CARBON	
	R756	QRD167J-470	47 1/6W CARBON	
	R757	QRD167J-183	18K 1/6W CARBON	
	R758	QRD167J-183	18K 1/6W CARBON	
	R759	QRD167J-222	2.2K 1/6W CARBON	
	R761	QRD167J-564	560K 1/6W CARBON	
	R762	QRD167J-224	220K 1/6W CARBON	
	R763	QRD167J-393	39K 1/6W CARBON	
	R764	QRD167J-224	220K 1/6W CARBON	
	R765	QRD167J-562	5.6K 1/6W CARBON	
	R766	QRD167J-392	3.9K 1/6W CARBON	
	R768	QRD167J-103	10K 1/6W CARBON	
	R769	QRD167J-102	1K 1/6W CARBON	
	R770	QRD167J-471	470 1/6W CARBON	
	R771	QRD167J-683	68K 1/6W CARBON	
	R772	QRD167J-183	18K 1/6W CARBON	
	R773	QRD167J-183	18K 1/6W CARBON	
	R774	QRD167J-470	47 1/6W CARBON	
	R775	QRD167J-335	3.3M 1/6W CARBON	
	R776	QRD167J-472	4.7K 1/6W CARBON	
	R777	QRD167J-472	4.7K 1/6W CARBON	
	R778	QRD167J-472	4.7K 1/6W CARBON	

⚠ :SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R781	QRD167J-684	680K 1/6W CARBON	
	R782	QRD167J-684	680K 1/6W CARBON	
	R783	QRD167J-823	82K 1/6W CARBON	
	R784	QRD167J-470	47 1/6W CARBON	
	R785	QRD167J-683	68K 1/6W CARBON	
	R786	QRD167J-123	12K 1/6W CARBON	
	R787	QRD167J-152	1.5K 1/6W CARBON	
	R788	QRD167J-2R2	2.2 1/6W CARBON	
	R790	QRD167J-684	680K 1/6W CARBON	
	R791	QRD167J-513	51K 1/6W CARBON	
	R792	QRD167J-513	51K 1/6W CARBON	
	R793	QRD167J-683	68K 1/6W CARBON	
	R794	QRD167J-683	68K 1/6W CARBON	
	R795	QRD161J-221	220 1/6W CARBON	
⚠	R797	QRZ0077-4R7	4.7 1/4W FUSIBLE	
	R801	QRD167J-563	56K 1/6W CARBON	
	R802	QRD167J-563	56K 1/6W CARBON	
	R803	QRD167J-394	390K 1/6W CARBON	
	R804	QRD167J-681	680 1/6W CARBON	
	R805	QVPA601-202A	2K VARIABLE	
	R806	QRD167J-561	560 1/6W CARBON	
	R807	QRD167J-334	330K 1/6W CARBON	
	R808	QRD167J-222	2.2K 1/6W CARBON	
	R809	QVPA601-154A	150K VARIABLE	
	R810	QRD167J-223	22K 1/6W CARBON	
	R811	QRD167J-682	6.8K 1/6W CARBON	
	R812	QRD167J-103	10K 1/6W CARBON	
	R813	QRD167J-562	5.6K 1/6W CARBON	
	R814	QRD167J-562	5.6K 1/6W CARBON	
	R815	QRD167J-562	5.6K 1/6W CARBON	
	R816	QRD167J-562	5.6K 1/6W CARBON	
	R817	QRD167J-183	18K 1/6W CARBON	
	R819	QRD167J-103	10K 1/6W CARBON	
	R820	QRD167J-224	220K 1/6W CARBON	
	R821	QRD167J-103	10K 1/6W CARBON	
	R823	QRD167J-434	430K 1/6W CARBON	
	R824	QRD167J-474	470K 1/6W CARBON	
	R825	QRD167J-103	10K 1/6W CARBON	
	R826	QRD167J-184	180K 1/6W CARBON	
	R827	QRD167J-104	100K 1/6W CARBON	
	R828	QRD167J-104	100K 1/6W CARBON	
	R829	QRD167J-681	680 1/6W CARBON	
	R830	QRD167J-183	18K 1/6W CARBON	
	R832	QRD167J-102	1K 1/6W CARBON	
	R833	QRD167J-562	5.6K 1/6W CARBON	
	R837	QRD167J-470	47 1/6W CARBON	
	R838	QRD167J-562	5.6K 1/6W CARBON	
	R839	QRD167J-183	18K 1/6W CARBON	
	R841	QRD167J-182	1.8K 1/6W CARBON	
	R842	QRD161J-221	220 1/6W CARBON	
	R843	QRD167J-184	180K 1/6W CARBON	
	R844	QRD167J-393	39K 1/6W CARBON	
	R845	QVPA601-104A	100K VARIABLE	
	R846	QRD167J-224	220K 1/6W CARBON	
	R847	QRD167J-182	1.8K 1/6W CARBON	
	R848	QRD167J-122	1.2K 1/6W CARBON	
	R849	QRD167J-822	8.2K 1/6W CARBON	
	R850	QRD167J-822	8.2K 1/6W CARBON	
	R851	QRD167J-821	820 1/6W CARBON	
	R852	QRD167J-182	1.8K 1/6W CARBON	
	R853	QRD167J-101	100 1/6W CARBON	
	R855	QRD167J-682	6.8K 1/6W CARBON	
	R856	QRD167J-682	6.8K 1/6W CARBON	
	R857	QRD167J-102	1K 1/6W CARBON	
	R859	QRD167J-102	1K 1/6W CARBON	
	R860	QRD167J-102	1K 1/6W CARBON	
	R861	QRD167J-103	10K 1/6W CARBON	
	R862	QRD167J-272	2.7K 1/6W CARBON	
	R863	QRD167J-102	1K 1/6W CARBON	
	R864	QRD167J-271	270 1/6W CARBON	
	R865	QRD167J-103	10K 1/6W CARBON	
	R866	QRD167J-562	5.6K 1/6W CARBON	
	R867	QRD167J-472	4.7K 1/6W CARBON	
	R868	QRD167J-822	8.2K 1/6W CARBON	
	R869	QRD167J-103	10K 1/6W CARBON	
	R871	QRD167J-561	560 1/6W CARBON	
	R873	QRD167J-561	560 1/6W CARBON	
	R874	QRD167J-561	560 1/6W CARBON	
	R875	QRD167J-472	4.7K 1/6W CARBON	
	R876	QRD167J-300	30 1/6W CARBON	
	R877	QRD167J-181	180 1/6W CARBON	
	R878	QRD167J-101	100 1/6W CARBON	
	R879	QRD167J-183	18K 1/6W CARBON	
	R880	QRD167J-183	18K 1/6W CARBON	
	R881	QRD167J-183	18K 1/6W CARBON	
	R882	QRD167J-183	18K 1/6W CARBON	
	R883	QRD167J-183	18K 1/6W CARBON	
	R884	QRD167J-183	18K 1/6W CARBON	
	R885	QRD167J-183	18K 1/6W CARBON	
	R886	QRD167J-183	18K 1/6W CARBON	
	R887	QRD167J-243	24K 1/6W CARBON	
	R888	QRD167J-243	24K 1/6W CARBON	
	R889	QRD167J-243	24K 1/6W CARBON	
	R890	QRD167J-243	24K 1/6W CARBON	
	R891	QRD167J-183	18K 1/6W CARBON	

⚠ :SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R892	QRD167J-183	18K 1/6W CARBON	
	R893	QRD167J-183	18K 1/6W CARBON	
	R894	QRD167J-183	18K 1/6W CARBON	
	R895	QRD167J-511	510 1/6W CARBON	
	R896	QRD167J-511	510 1/6W CARBON	
	R897	QRD167J-112	1.1K 1/6W CARBON	
	R898	QRD167J-112	1.1K 1/6W CARBON	
	R899	QRD167J-472	4.7K 1/6W CARBON	
	R900	QRD167J-472	4.7K 1/6W CARBON	
	R901	QRD167J-273	27K 1/6W CARBON	
	R902	QRD167J-273	27K 1/6W CARBON	
	R903	QRD167J-471	470 1/6W CARBON	
	R904	QRD167J-471	470 1/6W CARBON	
	R921	QRD167J-681	680 1/6W CARBON	
	R922	QRD167J-681	680 1/6W CARBON	
	R923	QRD167J-241	240 1/6W CARBON	
	R924	QRD167J-241	240 1/6W CARBON	
	R925	QRD167J-104	100K 1/6W CARBON	
	R926	QRD167J-104	100K 1/6W CARBON	
	R927	QRD167J-392	3.9K 1/6W CARBON	
	R928	QRD167J-392	3.9K 1/6W CARBON	
	R929	QRD167J-684	680K 1/6W CARBON	
	R930	QRD167J-154	150K 1/6W CARBON	
	R931	QRD167J-473	47K 1/6W CARBON	
	R937	QRD167J-222	2.2K 1/6W CARBON	
	R941	QRD167J-473	47K 1/6W CARBON	
	R942	QRD167J-473	47K 1/6W CARBON	
	R943	QRD167J-473	47K 1/6W CARBON	
	R944	QRD167J-473	47K 1/6W CARBON	
	R991	QRD167J-102	1K 1/6W CARBON	
	R992	QRD167J-473	47K 1/6W CARBON	
	R994	QRD167J-103	10K 1/6W CARBON	
	R995	QRD167J-472	4.7K 1/6W CARBON	
	R996	QRD167J-105	1M 1/6W CARBON	
	R999	QRD167J-472	4.7K 1/6W CARBON	

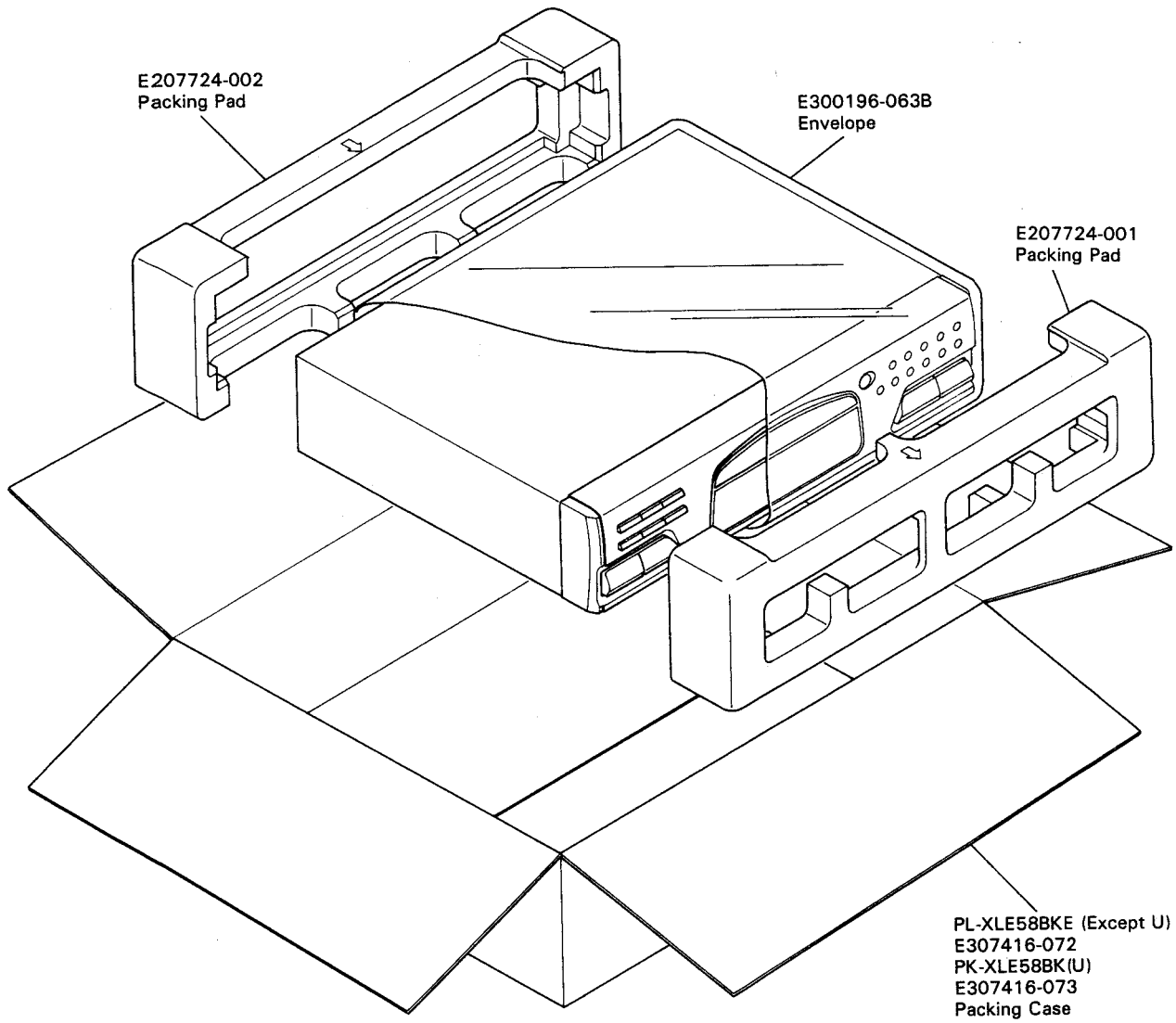
⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10308-002		
		E306805-010	SPACER	
		SBSE3008CC	SCREW	
	J991	EMV7120-006	CONNECTOR(6PIN : TO KEY MATRIX)	
	J992	EMV7123-021R	CONNECTOR(21PIN : FRONT PCB)	
	J993	EMV7123-021	CONNECTOR(21PIN : TO FRONT PCB)	
	J994	EMV7123-013	CONNECTOR(13PIN : TO MECHA ASS'Y)	
	J995	EMV5109-010A	PLUG ASSY(10PIN : TO PICK UP)	
	J996	EMV7141-013M	CONNECTOR(13PIN : SYSTEM CONNECTOR)	
	K114	ENZ8101-008	INDUCTOR	
	K980	ENZ8101-008	INDUCTOR	C
	K983	ENZ8101-008	INDUCTOR	
	K987	ENZ8101-008	INDUCTOR	
	L852	EQL4004-100	INDUCTOR	B
	P901	EMV5109-004A	PLUG ASSY	
	P991	EMV5120-006	PLUG ASSY	
	S901	ESP0001-023M	TACT SWITCH(STOP)	
	S902	ESP0001-023M	TACT SWITCH(FORWARD SKIP)	
	S903	ESP0001-023M	TACT SWITCH(PLAY/PAUSE)	
	S904	ESP0001-023M	TACT SWITCH(OPEN/CLOSE)	
	S905	ESP0001-023M	TACT SWITCH(BACKWARD SKIP)	
	S906	ESP0001-023M	TACT SWITCH(DISPLAY)	
	S907	ESP0001-023M	TACT SWITCH(REPEAT)	
	S908	ESP0001-023M	TACT SWITCH(AUTO EDIT)	
	S909	ESP0001-023M	TACT SWITCH(SIDE A/B)	
	S910	ESP0001-023M	TACT SWITCH(P.EDIT)	
	S911	ESP0001-023M	TACT SWITCH(RANDOM)	
	S912	ESP0001-023M	TACT SWITCH(1)	
	S913	ESP0001-023M	TACT SWITCH(2)	
	S914	ESP0001-023M	TACT SWITCH(3)	
	S915	ESP0001-023M	TACT SWITCH(4)	
	S916	ESP0001-023M	TACT SWITCH(5)	
	S917	ESP0001-023M	TACT SWITCH(6)	
	S918	ESP0001-023M	TACT SWITCH(7)	
	S919	ESP0001-023M	TACT SWITCH(8)	
	S920	ESP0001-023M	TACT SWITCH(9)	
	S921	ESP0001-023M	TACT SWITCH(10)	
	S922	ESP0001-023M	TACT SWITCH(+10)	
	X841	ECX0169-344EA	RESONATOR	
	BC901	EWS264-F413	SOCKET WIRE	
	BK991	E306951-002	FL DISPLAY HOLDER	
	CF991	ECX0004-194KM	RESONATOR	
	EP001	E70859-001	EARTH PLATE	
	EP002	E70859-001	EARTH PLATE	
	EP003	E70225-001	EARTH PLATE	
	FL991	ELU0001-114	FL TUBE	
	FW001	EWR36B-20SST	FLAT WIRE	
	HS001	E70306-001	HEAT SINK	

⚠ : SAFETY PARTS

Packing Materials and Part Numbers



Designated Areas	
BS .. the U.K.	EF ... Continental Europe
EN .. Scandinavia	U .... Universal Type
G ... Germany	No mark indicates all areas.

PARTS LIST

※ All printed circuit board assemblies are not arailable as service parts.

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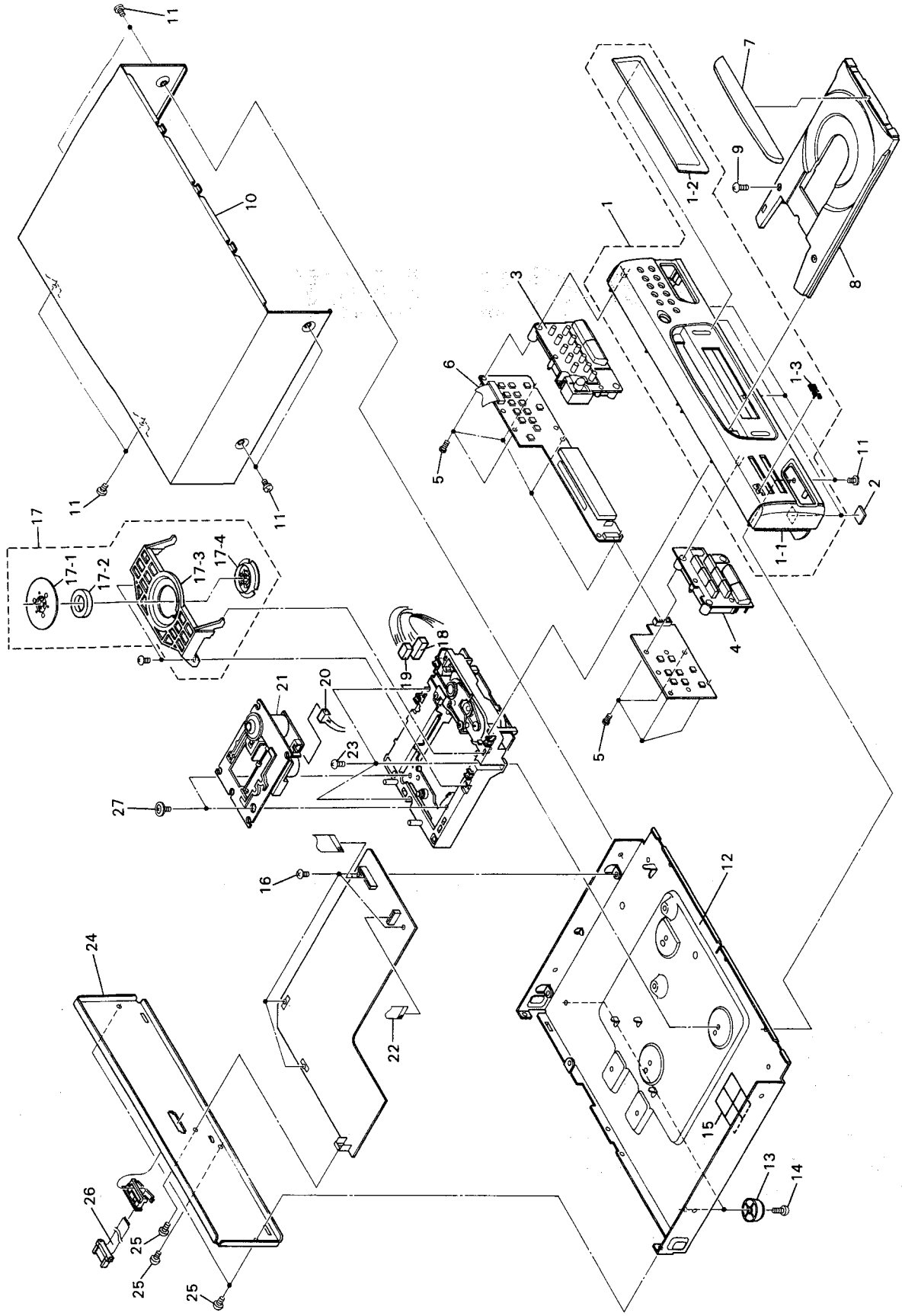
General Exploded View and Parts List



⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-XLE59TNE(S)	FRONT PANEL ASS'Y	1		
	1-1	E102656-001SS	FRONT PANEL	1		
	1-2	E308318-001SS	WINDOW SCREEN	1		
	1-3	E406971-221	JVC MARK	1		
	2	E75896-001	SPACER	2		
	3	E207720-001SS	PUSH BUTTON	1		
	4	E207721-003SS	PUSH BUTTON	1		
	5	SDSF2608Z	SCREW	9		
	6	EWR621G-15TTJ2	FLAT WIRE	1		
	7	E308316-001SS	CD FITTING	1		
	8	E12289-221SS	TRAY	1		
	9	SBSF3008M	SCREW	3		
	10	E26553-004SS	METAL COVER	1		
	11	SDSG3006M	SCREW	9		
	12	E102379-005SS	CHASSIS BASE	1		
	13	E47227-020	FOOT	2		
	14	SBSG3010Z	SCREW	2		
	15	E406507-001	CAUTION LABEL	1		
	16	SBSG3008CC	SCREW	4		
	17	E306837-003	CLAMPER BASE ASSY	1		
	17-1	E306836-003	CD YOKE	1		
	17-2	E74897-002	MAGENET	1		
	17-3	E26756-001	CLAMPER BASE	1		
	17-4	E306835-001	CLAMPER	1		
	18	EWS25A-B303	SOCKET WIRE	1		
	19	EWS254-B103	SOCKET WIRE	1		
	20	EWS256-B102	SOCKET WIRE	1		
	21	----------	CD MECHANISM ASSY	1	SEE PAGE 3-4	
	22	EWR613E-10TTJ2	FLAT WIRE	1		
	23	SBST3006Z	SCREW	3		
	24	E26446-003SS	REAR PANEL	1		Except U,UT
		E26446-005SS	REAR PANEL	1		U,UT
	-	E407136-001	RATING LABEL	1		U
	25	E73273-003	SCREW	4		
	26	EWP907-009	FLAT WIRE ASSY	1		
	27	E75871-003	SCREW	2		
	-	E61029-005	NUMBER LABEL	1		
	-	E70891-001	LABEL	1		BS
	-	E70027-001	LABEL	1		EN
	-	E407136-001	LABEL	1	Made in Singapore	U,UT

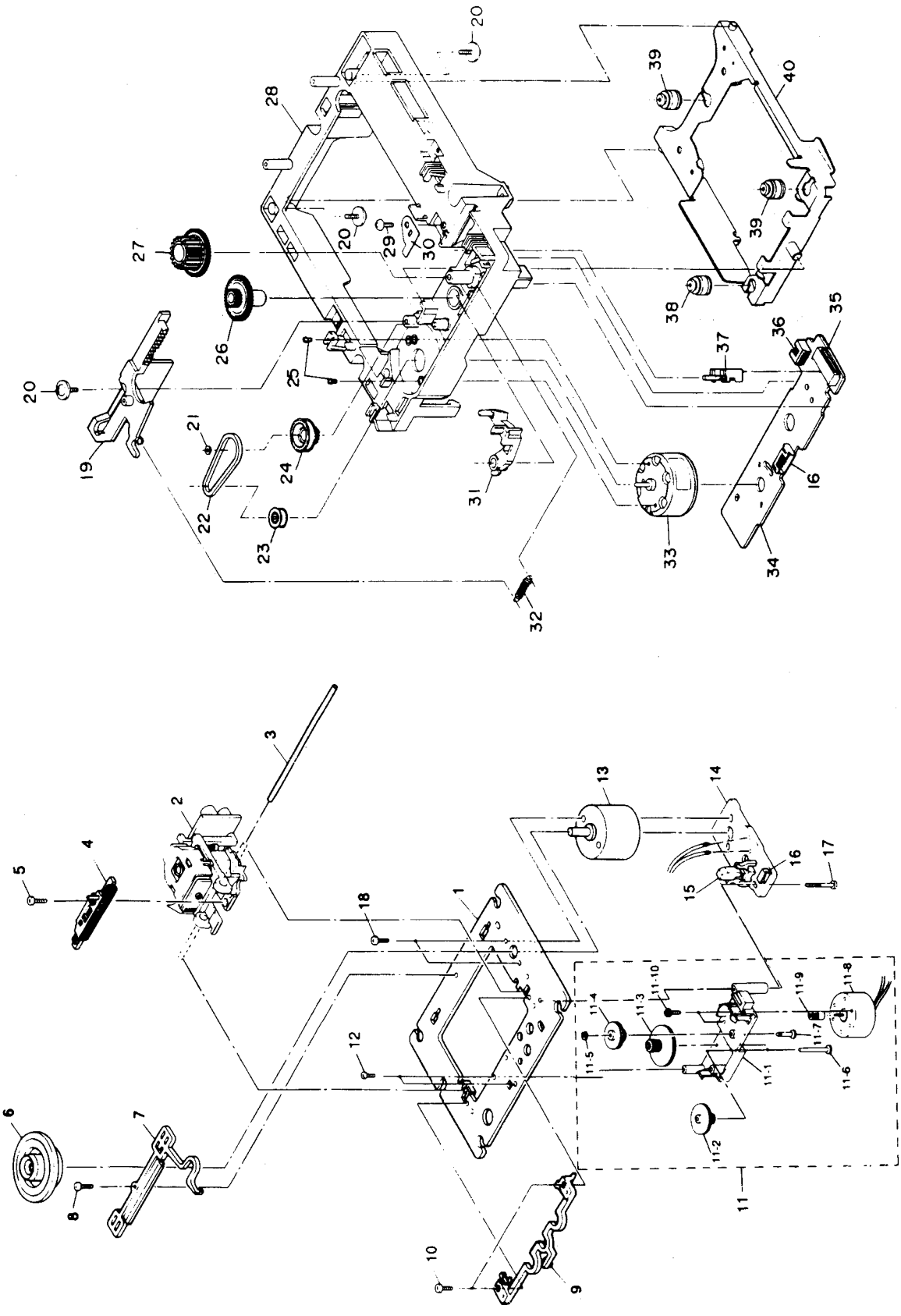
The Marks for Designated Areas

A ..... Australia EF ..... Continental Europe EN ..... Scandinavia

GI .... Italy U ..... Universal Type UT ..... Taiwan

No mark indecates all areas.

CD Mechanism Ass'y and Parts List



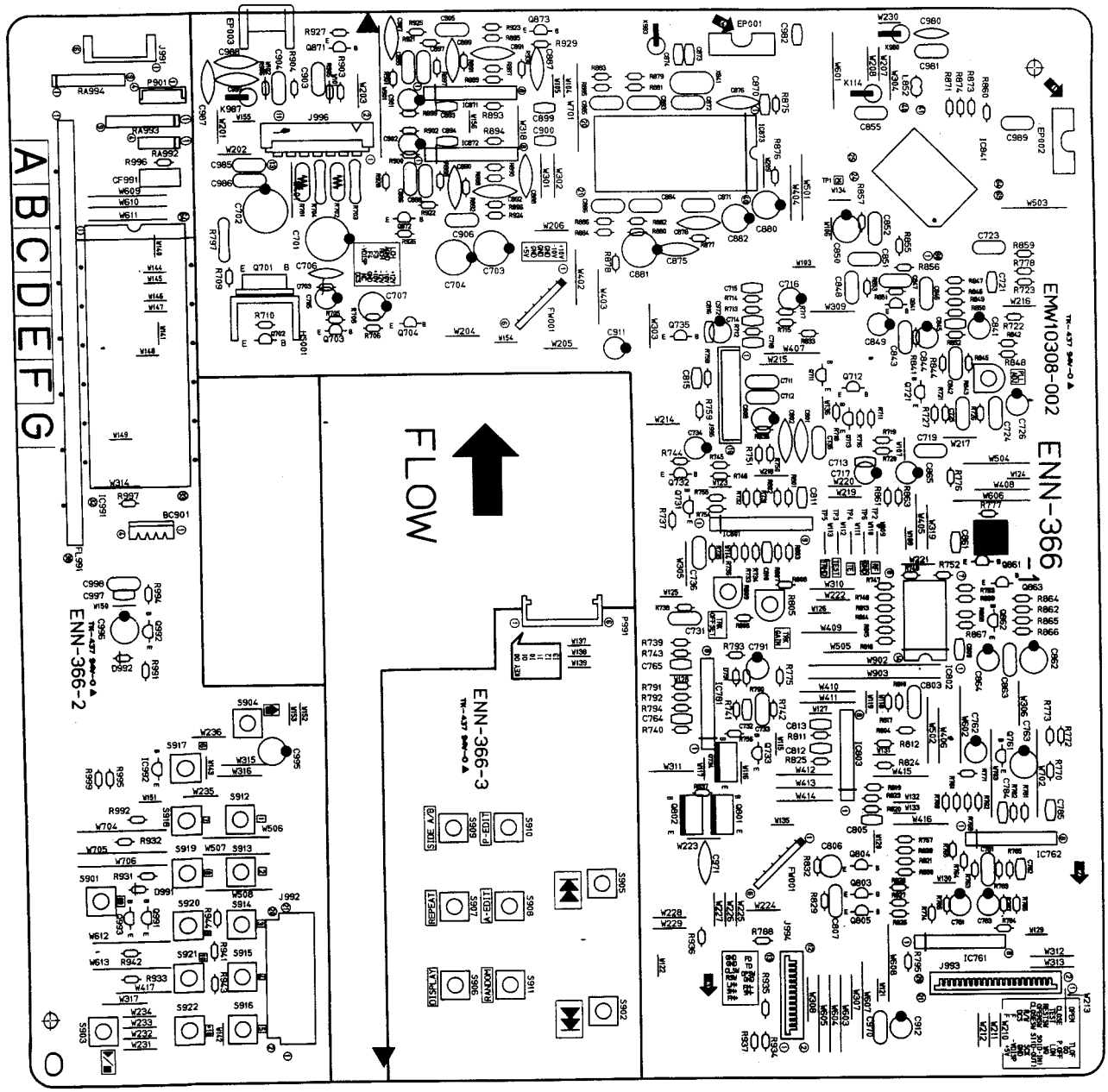
■ Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	E26487-003	Mechanism Base	1		
2	OPTIMA-5S	Pick up Ass'y	1		
3	E74930-003	Shaft	1		
4	E306282-001	Rack Ass'y	1		
5	SPSH2050M	Screw	1		
6	E406064-002	Turn Table Ass'y	1		
7	E306275-003	Support	1		
8	SDST2005Z	Screw	1		
9	E306277-001	Holder	1		
10	SDST2004Z	Screw	2		
11	SE10351-11	Gear Ass'y	1		
11-1	E306276-001	Gear Base	1		
11-2	E75444-001	Gear	1		
11-3	E75443-001	Gear	1		
11-4	E75445-001	Gear	1		
11-5	WDM163550	Slit Washer	1		
11-6	E75494-003	Shaft	2		
11-7	E75494-002	Shaft	1		
11-8	HKN-3A6RDNV	Feed Motor	1		
11-9	E75493-001	Pinion Gear	1		
11-10	LPSH1735Z	Screw	2		
12	E72713-001	Special Screw	2		
13	E74539-001B	Spindle Motor	1		
14	E12114-005 (S)	Circuit Board	1		
15	ESB1100-005	Leaf Switch	1	S001	
16	EMV5109-006B	6P Plug Ass'y	2	P011	
17	E75832-001	Special Screw	1		
18	SDSP2003N	Screw	2		
19	E306834-001	Cam	1		
20	E65923-003	Special Screw	3		
21	E72024-001	Speed Nut	1		
22	E75950-002	Belt	1		
23	E75984-001	Motor Pulley	1		
24	E75985-001	Gear (1)	1		
25	SPSK2640Z	Screw	2		
26	E75986-002	Gear (2)	1		
27	E75987-001	Gear (3)	1		
28	E12288-002	Loading Base	1		
29	SBSF3008Z	Screw	1		
30	E75988-001	Plate	1		
31	E306833-001	Lever	1		
32	E75989-001	Spring	1		
33	MMN-6F1LB8Q	Loading Motor	1		
34	EMW10060-002 (S)	Circuit Board	1		
35	EMV7123-013R	Connector	1	13Pin	
36	EMV5109-004B	Plug Ass'y	1	4Pin	
37	ESS1200-002	Switch	1		
38	E75609-002	Insulator	1		
39	E75609-001	Insulator	2		
40	E307087-001	Elevator Base Ass'y	1		

Printed Circuit Board Ass'y and Parts List

■ENN-366 □ CD PC Board Ass'y

Note : ENN-366 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENN-366 B	Australia Continental Eurpe Scandinavia Universal Type Taiwan
ENN-366 C	Italy

TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q701	2SB1187(E,F)	SILICON	ROHM	
	Q702	2SC1740(R,S)	SILICON	ROHM	
	Q703	2SA934(Q,R)	SILICON	ROHM	
	Q704	DTC114YS	SILICON	ROHM	
	Q711	2SC535(B,C)	SILICON	HITACHI	
	Q712	2SC1740S(R,S)	SILICON	ROHM	
	Q713	2SA933S(R,S)	SILICON	ROHM	
	Q721	2SD2144S(VW)	SILICON	ROHM	
	Q731	2SD2144S(VW)	SILICON	ROHM	
	Q732	2SA933S(R,S)	SILICON	ROHM	
	Q733	2SC2060(Q,R)	SILICON	ROHM	
	Q734	2SB1357(E,F)	SILICON	ROHM	
	Q735	DTA144WS	SILICON	ROHM	
	Q761	2SD2144S(VW)	SILICON	ROHM	
	Q801	2SD2037(E,F)	SILICON	ROHM	
	Q802	2SB1357(E,F)	SILICON	ROHM	
	Q803	2SD2144S(VW)	SILICON	ROHM	
	Q804	2SD2144S(VW)	SILICON	ROHM	
	Q805	2SD2144S(VW)	SILICON	ROHM	
	Q841	2SD2144S(VW)	SILICON	ROHM	
	Q861	2SA933S(R,S)	SILICON	ROHM	
	Q862	2SC1740S(R,S)	SILICON	ROHM	
	Q863	2SC1740S(R,S)	SILICON	ROHM	
	Q871	2SD2144S(VW)	SILICON	ROHM	
	Q872	2SD2144S(VW)	SILICON	ROHM	
	Q873	DTA144ES	SILICON	ROHM	
	Q991	DTA114YS	SILICON	ROHM	
	Q992	DTC114YS	SILICON	ROHM	
	Q993	DTC114YS	SILICON	ROHM	

⚠ : SAFETY PARTS

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC761	STA341M(A)	I.C.	SANKEN	
	IC762	M5218AL	I.C.	MITSUBISHI	
	IC781	M5218AL	I.C.	MITSUBISHI	
	IC801	NJM072S	I.C.	DAINICHI	
	IC802	BA10339	I.C.	ROHM	
	IC803	M5218AL	I.C.	MITSUBISHI	
	IC841	YM7121C	I.C.	YAMAHA	
	IC871	M5218AL	I.C.	MITSUBISHI	
	IC872	M5218AL	I.C.	MITSUBISHI	
	IC873	JCE4501	I.C.	MATSUSHITA	
	IC991	HD404019RC05S	I.C.	HITACHI	
	IC992	MN1281(P,Q)	I.C.	MATSUSHITA	

⚠ : SAFETY PARTS

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D703	MTZ5.6JB	ZENER	ROHM	
	D791	1SS254	SILICON	ROHM	
	D991	1SS254	SILICON	ROHM	
	D992	1SS254	SILICON	ROHM	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C701	QETB1CM-108	1000MF	16V	ELECTRO	
	C702	QETB1CM-108	1000MF	16V	ELECTRO	
	C703	QETB1CM-227	220MF	16V	ELECTRO	
	C704	QETB1CM-227	220MF	16V	ELECTRO	
	C705	QETB1CM-476	47MF	16V	ELECTRO	
	C706	QCF21HP-223	0.022MF	50V	CERAMIC	
	C707	QETB0JM-227	220MF	6.3V	ELECTRO	
	C711	QFN81HJ-472	4700PF	50V	MYLAR	
	C712	QFN81HJ-472	4700PF	50V	MYLAR	
	C713	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C714	QCSB1HK-3R9	3.9PF	50V	CERAMIC	
	C715	QCBB1HK-471	470PF	50V	CERAMIC	
	C716	QETB1EM-106	10MF	25V	ELECTRO	
	C717	QETB1CM-476	47MF	16V	ELECTRO	
	C718	QCBB1HK-101	100PF	50V	CERAMIC	
	C719	QFLB1HJ-183	0.018MF	50V	MYLAR	
	C721	QCSB1HJ-470	47PF	50V	CERAMIC	
	C723	QCZ0202-155	1.5MF	25V	CERAMIC	
	C724	QFLB1HJ-563	0.056MF	50V	MYLAR	
	C725	QFV81HJ-564	0.56MF	50V	T.FILM	
	C726	QETB1EM-106	10MF	25V	ELECTRO	
	C731	QFLB1HJ-183	0.018MF	50V	MYLAR	
	C732	QCBB1HK-271	270PF	50V	CERAMIC	
	C733	QFN81HJ-393	0.039MF	50V	MYLAR	
	C734	QETB1EM-226	22MF	25V	ELECTRO	
	C735	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C736	QFV81HJ-224	0.22MF	50V	T.FILM	
	C761	QEN51HM-225	2.2MF	50V	NON POLE	
	C762	QETB1EM-226	22MF	25V	ELECTRO	
	C763	QETB0JM-227	220MF	6.3V	ELECTRO	
	C764	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C765	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C781	QFN81HJ-272	2700PF	50V	MYLAR	
	C782	QCBB1HK-101	100PF	50V	CERAMIC	
	C783	QEN51HM-225	2.2MF	50V	NON POLE	
	C784	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C785	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C791	QETB1HM-475	4.7MF	50V	ELECTRO	
	C801	QCT26CH-151	150PF	50V	CERAMIC	
	C802	QCT26CH-121	120PF	50V	CERAMIC	
	C803	QFLB1HJ-223	0.022MF	50V	MYLAR	
	C805	QCSB1HK-4R7	4.7PF	50V	CERAMIC	
	C806	QEN51HM-225	2.2MF	50V	NON POLE	
	C807	QFLB1HJ-563	0.056MF	50V	MYLAR	
	C808	QETB1CM-476	47MF	16V	ELECTRO	
	C809	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C810	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C811	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C812	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C813	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C815	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C816	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C841	QETB1AM-107	100MF	10V	ELECTRO	
	C842	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C843	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C844	QETB1EM-106	10MF	25V	ELECTRO	
	C845	QCBB1HK-101	100PF	50V	CERAMIC	
	C846	QFV81HJ-105	1MF	50V	T.FILM	
	C847	QFN81HJ-182	1800PF	50V	MYLAR	
	C848	QFV81HJ-224	0.22MF	50V	T.FILM	
	C849	QETB1EM-106	10MF	25V	ELECTRO	
	C850	QETB0JM-227	220MF	6.3V	ELECTRO	
	C851	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C852	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C855	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C861	QCBB1HK-101	100PF	50V	CERAMIC	
	C862	QETB1CM-107	100MF	16V	ELECTRO	
	C863	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C864	QETB1EM-106	10MF	25V	ELECTRO	
	C865	QETB1HM-105	1MF	50V	ELECTRO	
	C871	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C872	QCZ0202-155	1.5MF	25V	CERAMIC	
	C873	QCT30CH-120	12PF	50V	CERAMIC	
	C874	QCT30CH-3R9	3.9PF	50V	CERAMIC	
	C875	QCS21HJ-100	10PF	50V	CERAMIC	
	C876	QCY21HK-392	3900PF	50V	CERAMIC	
	C878	QCS21HJ-5R0	5PF	50V	CERAMIC	
	C880	QETB0JM-227	220MF	6.3V	ELECTRO	
	C881	QETB0JM-477	470MF	6.3V	ELECTRO	
	C883	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C884	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C886	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C887	QCS21HJ-221	220PF	50V	CERAMIC	
	C888	QCS21HJ-221	220PF	50V	CERAMIC	
	C889	QCS21HJ-221	220PF	50V	CERAMIC	
	C890	QCS21HJ-221	220PF	50V	CERAMIC	
	C891	QCS21HJ-221	220PF	50V	CERAMIC	
	C892	QCS21HJ-221	220PF	50V	CERAMIC	
	C893	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C894	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C895	QFN81HJ-182	1800PF	50V	MYLAR	
	C896	QFN81HJ-182	1800PF	50V	MYLAR	
	C897	QFV81HJ-123	0.012MF	50V	T.FILM	
	C898	QFV81HJ-123	0.012MF	50V	T.FILM	
	C899	QCHB1EZ-223	0.022MF	25V	CERAMIC	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C900	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C901	QETB1EM-476	47MF 25V ELECTRO	
	C902	QETB1EM-476	47MF 25V ELECTRO	
	C903	QFN81HJ-562	5600PF 50V MYLAR	
	C904	QFN81HJ-562	5600PF 50V MYLAR	
	C905	QFLB1HJ-683	0.068MF 50V MYLAR	
	C906	QFLB1HJ-683	0.068MF 50V MYLAR	
	C907	QCF21HP-103	0.01MF 50V CERAMIC	
	C911	QETB1HM-226	22MF 50V ELECTRO	
	C912	QETB1HM-106	10MF 50V ELECTRO	
	C970	QCZ0202-155	1.5MF 25V CERAMIC	
	C971	QCF21HP-223	0.022MF 50V CERAMIC	
	C980	QCF21HP-102	1000PF 50V CERAMIC	C
	C987	QCF21HP-223	0.022MF 50V CERAMIC	
	C995	QER50JM-107	100MF 6.3V ELECTRO	
	C996	QETB1AM-107	100MF 10V ELECTRO	
	C997	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C998	QCZ0202-155	1.5MF 25V CERAMIC	
	C999	QCS21HJ-470	47PF 50V CERAMIC	C

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
⚠	R701	PTH61G25AR4R7M	FUSIBLE RE	SI
⚠	R702	PTH61G25AR4R7M	FUSIBLE RE	SI
⚠	R703	QRZ0077-100	10 1/4W FUSIBLE	
⚠	R704	QRZ0077-100	10 1/4W FUSIBLE	
	R705	QRD167J-472	4.7K 1/6W CARBON	
	R706	QRD167J-122	1.2K 1/6W CARBON	
	R708	QRD167J-472	4.7K 1/6W CARBON	
	R709	QRD167J-122	1.2K 1/6W CARBON	
	R710	QRD167J-121	120 1/6W CARBON	
	R711	QRD167J-183	18K 1/6W CARBON	
	R712	QRD167J-432	4.3K 1/6W CARBON	
	R713	QRD167J-391	390 1/6W CARBON	
	R714	QRD161J-221	220 1/6W CARBON	
	R715	QRD167J-152	1.5K 1/6W CARBON	
	R716	QRD167J-561	560 1/6W CARBON	
	R717	QRD167J-561	560 1/6W CARBON	
	R718	QRD167J-562	5.6K 1/6W CARBON	
	R719	QRD167J-152	1.5K 1/6W CARBON	
	R720	QRD167J-271	270 1/6W CARBON	
	R721	QRD167J-471	470 1/6W CARBON	
	R722	QRD167J-682	6.8K 1/6W CARBON	
	R723	QRD167J-103	10K 1/6W CARBON	
	R726	QRD167J-102	1K 1/6W CARBON	
	R727	QRD167J-183	18K 1/6W CARBON	
	R731	QRD167J-104	100K 1/6W CARBON	
	R732	QRD167J-104	100K 1/6W CARBON	
	R733	QRD167J-394	390K 1/6W CARBON	
	R734	QRD167J-394	390K 1/6W CARBON	
	R735	QRD167J-121	120 1/6W CARBON	
	R736	QRD167J-182	1.8K 1/6W CARBON	
	R737	QRD167J-681	680 1/6W CARBON	
	R738	QRD167J-473	47K 1/6W CARBON	
	R739	QRD167J-331	330 1/6W CARBON	
	R740	QRD167J-333	33K 1/6W CARBON	
	R741	QRD167J-273	27K 1/6W CARBON	
	R742	QRD167J-394	390K 1/6W CARBON	
	R743	QRD167J-105	1M 1/6W CARBON	
	R744	QRD167J-470	47 1/6W CARBON	
	R745	QRD167J-473	47K 1/6W CARBON	
	R746	QRD167J-272	2.7K 1/6W CARBON	
	R747	QRD167J-682	6.8K 1/6W CARBON	
	R748	QRD167J-104	100K 1/6W CARBON	
	R749	QRD167J-562	5.6K 1/6W CARBON	
	R750	QRD167J-105	1M 1/6W CARBON	
	R751	QRD167J-105	1M 1/6W CARBON	
	R752	QRD167J-104	100K 1/6W CARBON	
	R753	QRD167J-562	5.6K 1/6W CARBON	
	R754	QRD167J-104	100K 1/6W CARBON	
	R755	QRD167J-103	10K 1/6W CARBON	
	R756	QRD167J-470	47 1/6W CARBON	
	R757	QRD167J-183	18K 1/6W CARBON	
	R758	QRD167J-183	18K 1/6W CARBON	
	R759	QRD167J-222	2.2K 1/6W CARBON	
	R761	QRD167J-564	560K 1/6W CARBON	
	R762	QRD167J-224	220K 1/6W CARBON	
	R763	QRD167J-393	39K 1/6W CARBON	
	R764	QRD167J-224	220K 1/6W CARBON	
	R765	QRD167J-562	5.6K 1/6W CARBON	
	R766	QRD167J-392	3.9K 1/6W CARBON	
	R768	QRD167J-103	10K 1/6W CARBON	
	R769	QRD167J-102	1K 1/6W CARBON	
	R770	QRD167J-471	470 1/6W CARBON	
	R771	QRD167J-683	68K 1/6W CARBON	
	R772	QRD167J-183	18K 1/6W CARBON	
	R773	QRD167J-183	18K 1/6W CARBON	
	R774	QRD167J-470	47 1/6W CARBON	
	R775	QRD167J-335	3.3M 1/6W CARBON	
	R776	QRD167J-472	4.7K 1/6W CARBON	
	R777	QRD167J-472	4.7K 1/6W CARBON	
	R778	QRD167J-472	4.7K 1/6W CARBON	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R781	QRD167J-684	680K 1/6W CARBON	
	R782	QRD167J-684	680K 1/6W CARBON	
	R783	QRD167J-823	82K 1/6W CARBON	
	R784	QRD167J-470	47 1/6W CARBON	
	R785	QRD167J-683	68K 1/6W CARBON	
	R786	QRD167J-123	12K 1/6W CARBON	
	R787	QRD167J-152	1.5K 1/6W CARBON	
	R788	QRD167J-2R2	2.2 1/6W CARBON	
	R790	QRD167J-684	680K 1/6W CARBON	
	R791	QRD167J-513	51K 1/6W CARBON	
	R792	QRD167J-513	51K 1/6W CARBON	
	R793	QRD167J-683	68K 1/6W CARBON	
	R794	QRD167J-683	68K 1/6W CARBON	
	R795	QRD161J-221	220 1/6W CARBON	
⚠	R797	QRZ0077-4R7	4.7 1/4W FUSIBLE	
	R801	QRD167J-563	56K 1/6W CARBON	
	R802	QRD167J-563	56K 1/6W CARBON	
	R803	QRD167J-394	390K 1/6W CARBON	
	R804	QRD167J-681	680 1/6W CARBON	
	R805	QVPA601-202A	2K VARIABLE	
	R806	QRD167J-561	560 1/6W CARBON	
	R807	QRD167J-334	330K 1/6W CARBON	
	R808	QRD167J-222	2.2K 1/6W CARBON	
	R809	QVPA601-154A	150K VARIABLE	
	R810	QRD167J-223	22K 1/6W CARBON	
	R811	QRD167J-682	6.8K 1/6W CARBON	
	R812	QRD167J-103	10K 1/6W CARBON	
	R813	QRD167J-562	5.6K 1/6W CARBON	
	R814	QRD167J-562	5.6K 1/6W CARBON	
	R815	QRD167J-562	5.6K 1/6W CARBON	
	R816	QRD167J-562	5.6K 1/6W CARBON	
	R817	QRD167J-183	18K 1/6W CARBON	
	R819	QRD167J-103	10K 1/6W CARBON	
	R820	QRD167J-224	220K 1/6W CARBON	
	R821	QRD167J-103	10K 1/6W CARBON	
	R823	QRD167J-434	430K 1/6W CARBON	
	R824	QRD167J-474	470K 1/6W CARBON	
	R825	QRD167J-103	10K 1/6W CARBON	
	R826	QRD167J-184	180K 1/6W CARBON	
	R827	QRD167J-104	100K 1/6W CARBON	
	R828	QRD167J-104	100K 1/6W CARBON	
	R829	QRD167J-681	680 1/6W CARBON	
	R830	QRD167J-183	18K 1/6W CARBON	
	R832	QRD167J-102	1K 1/6W CARBON	
	R833	QRD167J-562	5.6K 1/6W CARBON	
	R837	QRD167J-470	47 1/6W CARBON	
	R838	QRD167J-562	5.6K 1/6W CARBON	
	R839	QRD167J-183	18K 1/6W CARBON	
	R841	QRD167J-182	1.8K 1/6W CARBON	
	R842	QRD161J-221	220 1/6W CARBON	
	R843	QRD167J-184	180K 1/6W CARBON	
	R844	QRD167J-393	39K 1/6W CARBON	
	R845	QVPA601-104A	100K VARIABLE	
	R846	QRD167J-224	220K 1/6W CARBON	
	R847	QRD167J-182	1.8K 1/6W CARBON	
	R848	QRD167J-122	1.2K 1/6W CARBON	
	R849	QRD167J-822	8.2K 1/6W CARBON	
	R850	QRD167J-822	8.2K 1/6W CARBON	
	R851	QRD167J-821	820 1/6W CARBON	
	R852	QRD167J-182	1.8K 1/6W CARBON	
	R853	QRD167J-101	100 1/6W CARBON	
	R855	QRD167J-682	6.8K 1/6W CARBON	
	R856	QRD167J-682	6.8K 1/6W CARBON	
	R857	QRD167J-102	1K 1/6W CARBON	
	R859	QRD167J-102	1K 1/6W CARBON	
	R860	QRD167J-102	1K 1/6W CARBON	
	R861	QRD167J-103	10K 1/6W CARBON	
	R862	QRD167J-272	2.7K 1/6W CARBON	
	R863	QRD167J-102	1K 1/6W CARBON	
	R864	QRD167J-271	270 1/6W CARBON	
	R865	QRD167J-103	10K 1/6W CARBON	
	R866	QRD167J-562	5.6K 1/6W CARBON	
	R867	QRD167J-472	4.7K 1/6W CARBON	
	R868	QRD167J-822	8.2K 1/6W CARBON	
	R869	QRD167J-103	10K 1/6W CARBON	
	R871	QRD167J-561	560 1/6W CARBON	
	R873	QRD167J-561	560 1/6W CARBON	
	R874	QRD167J-561	560 1/6W CARBON	
	R875	QRD167J-472	4.7K 1/6W CARBON	
	R876	QRD167J-300	30 1/6W CARBON	
	R877	QRD167J-181	180 1/6W CARBON	
	R878	QRD167J-101	100 1/6W CARBON	
	R879	QRD167J-183	18K 1/6W CARBON	
	R880	QRD167J-183	18K 1/6W CARBON	
	R881	QRD167J-183	18K 1/6W CARBON	
	R882	QRD167J-183	18K 1/6W CARBON	
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	R885	QRD167J-183	18K 1/6W CARBON	
	R886	QRD167J-183	18K 1/6W CARBON	
	R887	QRD167J-243	24K 1/6W CARBON	
	R888	QRD167J-243	24K 1/6W CARBON	
	R889	QRD167J-243	24K 1/6W CARBON	
	R890	QRD167J-243	24K 1/6W CARBON	
	R891	QRD167J-183	18K 1/6W CARBON	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R892	QRD167J-183	18K 1/6W CARBON	
	R893	QRD167J-183	18K 1/6W CARBON	
	R894	QRD167J-183	18K 1/6W CARBON	
	R895	QRD167J-511	510 1/6W CARBON	
	R896	QRD167J-511	510 1/6W CARBON	
	R897	QRD167J-112	1.1K 1/6W CARBON	
	R898	QRD167J-112	1.1K 1/6W CARBON	
	R899	QRD167J-472	4.7K 1/6W CARBON	
	R900	QRD167J-472	4.7K 1/6W CARBON	
	R901	QRD167J-273	27K 1/6W CARBON	
	R902	QRD167J-273	27K 1/6W CARBON	
	R903	QRD167J-471	470 1/6W CARBON	
	R904	QRD167J-471	470 1/6W CARBON	
	R921	QRD167J-681	680 1/6W CARBON	
	R922	QRD167J-681	680 1/6W CARBON	
	R923	QRD167J-241	240 1/6W CARBON	
	R924	QRD167J-241	240 1/6W CARBON	
	R925	QRD167J-104	100K 1/6W CARBON	
	R926	QRD167J-104	100K 1/6W CARBON	
	R927	QRD167J-392	3.9K 1/6W CARBON	
	R928	QRD167J-392	3.9K 1/6W CARBON	
	R929	QRD167J-684	680K 1/6W CARBON	
	R930	QRD167J-154	150K 1/6W CARBON	
	R931	QRD167J-473	47K 1/6W CARBON	
	R937	QRD167J-222	2.2K 1/6W CARBON	
	R941	QRD167J-473	47K 1/6W CARBON	
	R942	QRD167J-473	47K 1/6W CARBON	
	R943	QRD167J-473	47K 1/6W CARBON	
	R944	QRD167J-473	47K 1/6W CARBON	
	R991	QRD167J-102	1K 1/6W CARBON	
	R992	QRD167J-473	47K 1/6W CARBON	
	R994	QRD167J-103	10K 1/6W CARBON	
	R995	QRD167J-472	4.7K 1/6W CARBON	
	R996	QRD167J-105	1M 1/6W CARBON	
	R999	QRD167J-472	4.7K 1/6W CARBON	

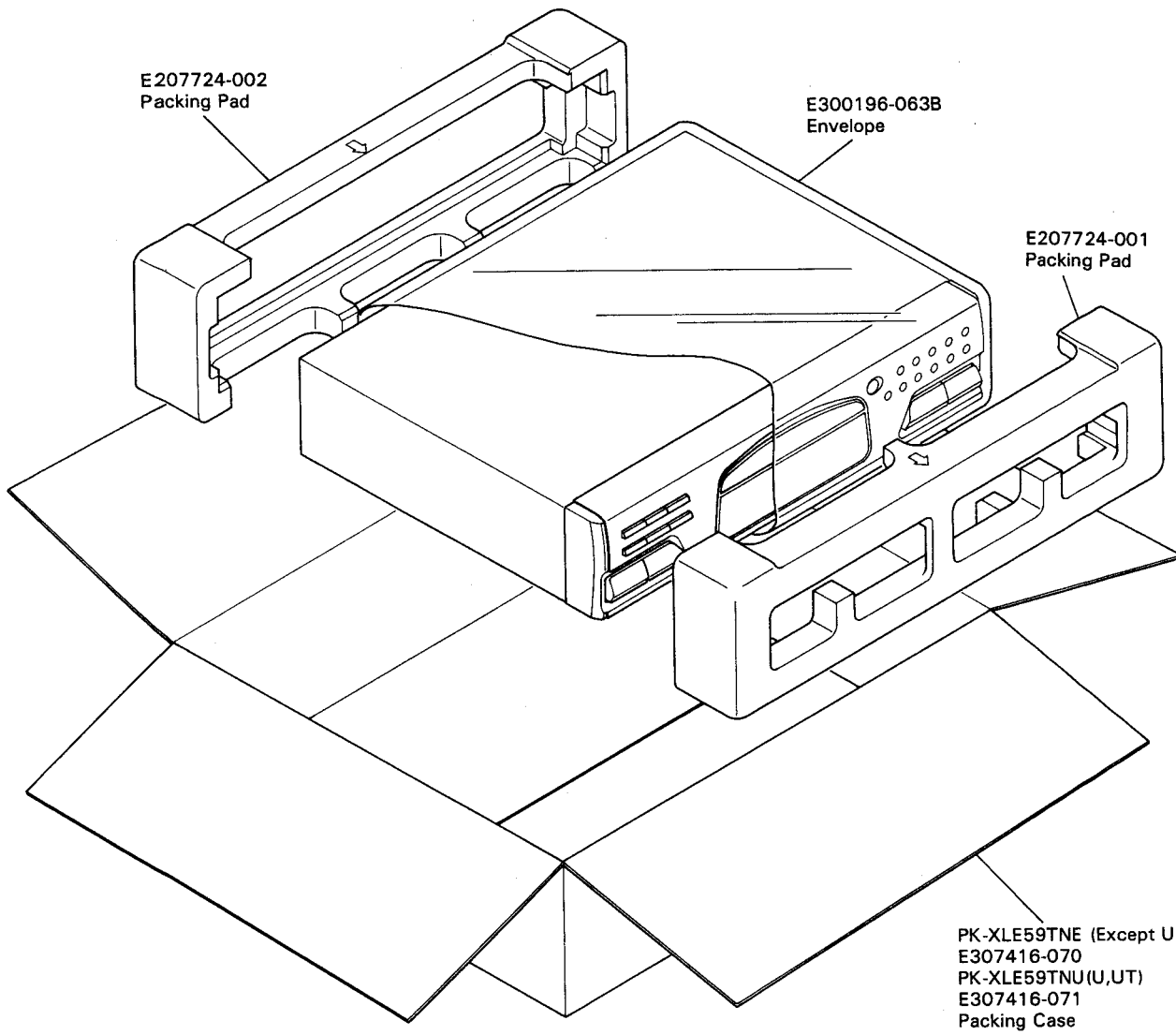
⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10308-002		
		E306805-010	SPACER	
		SBSE3008CC	SCREW	
	J991	EMV7120-006	CONNECTOR(6PIN : TO KEY MATRIX)	
	J992	EMV7123-021R	CONNECTOR(21PIN : FRONT PCB)	
	J993	EMV7123-021	CONNECTOR(21PIN : TO FRONT PCB)	
	J994	EMV7123-013	CONNECTOR(13PIN : TO MECHA ASS'Y)	
	J995	EMV5109-010A	PLUG ASSY(10PIN : TO PICK UP)	
	J996	EMV7141-013M	CONNECTOR(13PIN : SYSTEM CONNECTOR)	
	K114	ENZ8101-008	INDUCTOR	
	K980	ENZ8101-008	INDUCTOR	
	K983	ENZ8101-008	INDUCTOR	
	K987	ENZ8101-008	INDUCTOR	
	L852	EQL4004-100	INDUCTOR	B
	P901	EMV5109-004A	PLUG ASSY	
	P991	EMV5120-006	PLUG ASSY	
	S901	ESP0001-023M	TACT SWITCH(STOP)	
	S902	ESP0001-023M	TACT SWITCH(FORWARD SKIP)	
	S903	ESP0001-023M	TACT SWITCH(PLAY/PAUSE)	
	S904	ESP0001-023M	TACT SWITCH(OPEN/CLOSE)	
	S905	ESP0001-023M	TACT SWITCH(BACKWARD SKIP)	
	S906	ESP0001-023M	TACT SWITCH(DISPLAY)	
	S907	ESP0001-023M	TACT SWITCH(REPEAT)	
	S908	ESP0001-023M	TACT SWITCH(AUTO EDIT)	
	S909	ESP0001-023M	TACT SWITCH(SIDE A/B)	
	S910	ESP0001-023M	TACT SWITCH(P.EDIT)	
	S911	ESP0001-023M	TACT SWITCH(RANDOM)	
	S912	ESP0001-023M	TACT SWITCH(1)	
	S913	ESP0001-023M	TACT SWITCH(2)	
	S914	ESP0001-023M	TACT SWITCH(3)	
	S915	ESP0001-023M	TACT SWITCH(4)	
	S916	ESP0001-023M	TACT SWITCH(5)	
	S917	ESP0001-023M	TACT SWITCH(6)	
	S918	ESP0001-023M	TACT SWITCH(7)	
	S919	ESP0001-023M	TACT SWITCH(8)	
	S920	ESP0001-023M	TACT SWITCH(9)	
	S921	ESP0001-023M	TACT SWITCH(10)	
	S922	ESP0001-023M	TACT SWITCH(+10)	
	X841	ECX0169-344EA	RESONATOR	
	BC901	EWS264-F413	SOCKET WIRE	
	BK991	E306951-002	FL DISPLAY HOLDER	
	CF991	ECX0004-194KM	RESONATOR	
	EP001	E70859-001	EARTH PLATE	
	EP002	E70859-001	EARTH PLATE	
	EP003	E70225-001	EARTH PLATE	
	FL991	ELU0001-114	FL TUBE	
	FW001	EWR36B-20SST	FLAT WIRE	
	HS001	E70306-001	HEAT SINK	

⚠ : SAFETY PARTS

Packing Materials and Part Numbers



Designated Areas			
A ...	Australia	EF ...	Continental Europe
EN ..	Scandinavia	U	Universal Type
UT ..	Taiwan	No mark indicates all areas.	